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New Jersey
ACCUTEST
LABORATORIES

12/19/11

Technical Report for

Anderson, Mulholland & Associates

BMSMC, Building 5 Area, PR

SM04.00.06

Accutest Job Number: JA93967

Sampling Date: 12/06/11

Report to:

Anderson, Mulholland & Associates

ttaylor@amaiconsult.com

ATTN: Terry Taylor

Total number of pages in report: **472**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis
VP, Laboratory Director

Client Service contact: Tammy McCloskey 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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Sample Summary

Anderson, Mulholland & Associates

Job No: JA93967

BMSMC, Building 5 Area, PR
Project No: SM04.00.06

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA93967-1	12/06/11	10:00	TT	12/07/11	SO	Soil	I-6 (8.5-9.5)
JA93967-2	12/06/11	11:00	TT	12/07/11	SO	Soil	I-5 (9-10)
JA93967-3	12/06/11	11:45	TT	12/07/11	SO	Soil	I-4 (5-6)
JA93967-4	12/06/11	11:45	TT	12/07/11	SO	Soil	I-4 (5-6)D
JA93967-5	12/06/11	12:00	TT	12/07/11	AQ	Equipment Blank	EB120611
JA93967-6	12/06/11	11:45	TT	12/07/11	AQ	Field Blank Soil	FB120611
JA93967-7	12/06/11	12:00	TT	12/07/11	AQ	Trip Blank Soil	TB120611

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Anderson, Mulholland & Associates	**Job No**	JA93967
Site:	BMSMC, Building 5 Area, PR	**Report Date**	12/15/2011 8:02:42 A

On 12/07/2011, 4 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) and 1 Equipment Blank(s) were received at Accutest Laboratories at a temperature of 3 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JA93967 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** V4D818

- All samples were analyzed within the recommended method holding time.
- Sample(s) JA93129-1MS, JA93129-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix: SO **Batch ID:** VD7741

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA93508-5MS, JA93508-5MSD were used as the QC samples indicated.

Matrix: SO **Batch ID:** VD7744

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA94317-2MS, JA94317-2MSD were used as the QC samples indicated.

Matrix: SO **Batch ID:** VY5054

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA93656-19MS, JA93656-19MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846-8015 (DAI)

Matrix: AQ **Batch ID:** GGH3916

- All samples were analyzed within the recommended method holding time.
- Sample(s) JA93907-1MS, JA93907-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix: SO **Batch ID:** GGH3918

- All samples were analyzed within the recommended method holding time.
- Sample(s) JA93968-1MS, JA93968-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- JA93967-4 for Methanol: More than 40 % RPD for detected concentrations between the two GC columns.
- JA93967-3 for Methanol: More than 40 % RPD for detected concentrations between the two GC columns.

Wet Chemistry By Method SM18 2540G

Matrix: SO	Batch ID: GN59173

- The data for SM18 2540G meets quality control requirements.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Sample Results

Report of Analysis

Raw Data: Y118315.D

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	I-6 (8.5-9.5)		
Lab Sample ID:	JA93967-1	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846 8260B SW846 5035	**Percent Solids:**	74.7
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y118315.D	1	12/08/11	RS	12/08/11 09:00	n/a	VY5054
Run #2							

	Initial Weight
Run #1	5.4 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	12	8.2	ug/kg	
71-43-2	Benzene	ND	1.2	0.16	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.18	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	6.2	3.3	ug/kg	
108-88-3	Toluene	ND	1.2	0.47	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.23	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		67-131%
17060-07-0	1,2-Dichloroethane-D4	86%		66-130%
2037-26-5	Toluene-D8	97%		76-125%
460-00-4	4-Bromofluorobenzene	96%		53-142%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	I-6 (8.5-9.5)		
Lab Sample ID:	JA93967-1	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846-8015 (DAI)	**Percent Solids:**	74.7
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH85761.D	1	12/09/11	XPL	n/a	n/a	GGH3918
Run #2							

	Initial Weight
Run #1	5.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	ND	130	51	ug/kg	
67-56-1	Methanol	ND	270	69	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	75%		58-137%
111-27-3	Hexanol	76%		58-137%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	I-5 (9-10)		
Lab Sample ID:	JA93967-2	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846 8260B SW846 5035	**Percent Solids:**	71.5
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y118316.D	1	12/08/11	RS	12/08/11 09:00	n/a	VY5054
Run #2							

	Initial Weight
Run #1	5.7 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	23.3	12	8.1	ug/kg	
71-43-2	Benzene	ND	1.2	0.16	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.18	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	6.1	3.2	ug/kg	
108-88-3	Toluene	ND	1.2	0.46	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.23	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		67-131%
17060-07-0	1,2-Dichloroethane-D4	87%		66-130%
2037-26-5	Toluene-D8	98%		76-125%
460-00-4	4-Bromofluorobenzene	93%		53-142%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	I-5 (9-10)		
Lab Sample ID:	JA93967-2	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846 8260B SW846 5035	**Percent Solids:**	71.5
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y118316.D	1	12/08/11	RS	12/08/11 09:00	n/a	VY5054
Run #2							

	Initial Weight
Run #1	5.7 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	23.3	12	8.1	ug/kg	
71-43-2	Benzene	ND	1.2	0.16	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.18	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	6.1	3.2	ug/kg	
108-88-3	Toluene	ND	1.2	0.46	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.23	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		67-131%
17060-07-0	1,2-Dichloroethane-D4	87%		66-130%
2037-26-5	Toluene-D8	98%		76-125%
460-00-4	4-Bromofluorobenzene	93%		53-142%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	I-5 (9-10)		
Lab Sample ID:	JA93967-2	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846-8015 (DAI)	**Percent Solids:**	71.5
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH85762.D	1	12/09/11	XPL	n/a	n/a	GGH3918
Run #2							

	Initial Weight
Run #1	5.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	ND	140	53	ug/kg	
67-56-1	Methanol	ND	280	72	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	76%		58-137%
111-27-3	Hexanol	72%		58-137%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Raw Data: D190227.D D190158.D

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	I-4 (5-6)		
Lab Sample ID:	JA93967-3	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846 8260B SW846 5035	**Percent Solids:**	77.9
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	D190227.D	1	12/12/11	ET	12/08/11 09:00	n/a	VD7744
Run #2	D190158.D	1	12/10/11	ET	12/08/11 09:00	n/a	VD7741

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.4 g	5.0 ml	1.0 ul
Run #2	5.4 g	5.0 ml	10.0 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	115000 [a]	7400	4900	ug/kg	
71-43-2	Benzene	ND [a]	740	98	ug/kg	
100-41-4	Ethylbenzene	588000	7400	1100	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	240000	37000	19000	ug/kg	
108-88-3	Toluene	178000	7400	2800	ug/kg	
1330-20-7	Xylene (total)	2160000	7400	1400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	92%	67-131%
17060-07-0	1,2-Dichloroethane-D4	99%	91%	66-130%
2037-26-5	Toluene-D8	115%	98%	76-125%
460-00-4	4-Bromofluorobenzene	102%	85%	53-142%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	I-4 (5-6)		
Lab Sample ID:	JA93967-3	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846 8260B SW846 5035	**Percent Solids:**	77.9
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	D190227.D	1	12/12/11	ET	12/08/11 09:00	n/a	VD7744
Run #2	D190158.D	1	12/10/11	ET	12/08/11 09:00	n/a	VD7741

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.4 g	5.0 ml	1.0 ul
Run #2	5.4 g	5.0 ml	10.0 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	115000 [a]	7400	4900	ug/kg	
71-43-2	Benzene	ND [a]	740	98	ug/kg	
100-41-4	Ethylbenzene	588000	7400	1100	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	240000	37000	19000	ug/kg	
108-88-3	Toluene	178000	7400	2800	ug/kg	
1330-20-7	Xylene (total)	2160000	7400	1400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	92%	67-131%
17060-07-0	1,2-Dichloroethane-D4	99%	91%	66-130%
2037-26-5	Toluene-D8	115%	98%	76-125%
460-00-4	4-Bromofluorobenzene	102%	85%	53-142%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	I-4 (5-6)		
Lab Sample ID:	JA93967-3	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846-8015 (DAI)	**Percent Solids:**	77.9
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH85763.D	1	12/09/11	XPL	n/a	n/a	GGH3918
Run #2							

	Initial Weight
Run #1	5.1 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	62000	130	48	ug/kg	
67-56-1	Methanol [a]	487	250	65	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	100%		58-137%
111-27-3	Hexanol	89%		58-137%

(a) More than 40 % RPD for detected concentrations between the two GC columns.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Raw Data: D190228.D D190159.D

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	I-4 (5-6)D		
Lab Sample ID:	JA93967-4	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846 8260B SW846 5035	**Percent Solids:**	75.8
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	D190228.D	1	12/12/11	ET	12/08/11 09:00	n/a	VD7744
Run #2	D190159.D	1	12/10/11	ET	12/08/11 09:00	n/a	VD7741

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.5 g	5.0 ml	1.0 ul
Run #2	5.5 g	5.0 ml	10.0 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	95700 [a]	7600	5000	ug/kg	
71-43-2	Benzene	ND [a]	760	100	ug/kg	
100-41-4	Ethylbenzene	540000	7600	1100	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	258000	38000	20000	ug/kg	
108-88-3	Toluene	210000	7600	2900	ug/kg	
1330-20-7	Xylene (total)	2000000	7600	1400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	92%	67-131%
17060-07-0	1,2-Dichloroethane-D4	99%	91%	66-130%
2037-26-5	Toluene-D8	112%	101%	76-125%
460-00-4	4-Bromofluorobenzene	101%	85%	53-142%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Raw Data: GH85763.D

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	I-4 (5-6)		
Lab Sample ID:	JA93967-3	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846-8015 (DAI)	**Percent Solids:**	77.9
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH85763.D	1	12/09/11	XPL	n/a	n/a	GGH3918
Run #2							

	Initial Weight
Run #1	5.1 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	62000	130	48	ug/kg	
67-56-1	Methanol [a]	487	250	65	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	100%		58-137%
111-27-3	Hexanol	89%		58-137%

(a) More than 40 % RPD for detected concentrations between the two GC columns.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	I-4 (5-6)D		
Lab Sample ID:	JA93967-4	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846 8260B SW846 5035	**Percent Solids:**	75.8
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	D190228.D	1	12/12/11	ET	12/08/11 09:00	n/a	VD7744
Run #2	D190159.D	1	12/10/11	ET	12/08/11 09:00	n/a	VD7741

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.5 g	5.0 ml	1.0 ul
Run #2	5.5 g	5.0 ml	10.0 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	95700 [a]	7600	5000	ug/kg	
71-43-2	Benzene	ND [a]	760	100	ug/kg	
100-41-4	Ethylbenzene	540000	7600	1100	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	258000	38000	20000	ug/kg	
108-88-3	Toluene	210000	7600	2900	ug/kg	
1330-20-7	Xylene (total)	2000000	7600	1400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	92%	67-131%
17060-07-0	1,2-Dichloroethane-D4	99%	91%	66-130%
2037-26-5	Toluene-D8	112%	101%	76-125%
460-00-4	4-Bromofluorobenzene	101%	85%	53-142%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	I-4 (5-6)D		
Lab Sample ID:	JA93967-4	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846-8015 (DAI)	**Percent Solids:**	75.8
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH85764.D	1	12/09/11	XPL	n/a	n/a	GGH3918
Run #2							

	Initial Weight
Run #1	5.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	59700	130	50	ug/kg	
67-56-1	Methanol [a]	521	260	68	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	96%		58-137%
111-27-3	Hexanol	85%		58-137%

(a) More than 40 % RPD for detected concentrations between the two GC columns.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	I-4 (5-6)D		
Lab Sample ID:	JA93967-4	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846-8015 (DAI)	**Percent Solids:**	75.8
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH85764.D	1	12/09/11	XPL	n/a	n/a	GGH3918
Run #2							

	Initial Weight
Run #1	5.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	59700	130	50	ug/kg	
67-56-1	Methanol [a]	521	260	68	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	96%		58-137%
111-27-3	Hexanol	85%		58-137%

(a) More than 40 % RPD for detected concentrations between the two GC columns.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Raw Data: 4D18512.D

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	EB120611		
Lab Sample ID:	JA93967-5	**Date Sampled:**	12/06/11
Matrix:	AQ - Equipment Blank	**Date Received:**	12/07/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D18512.D	1	12/08/11	TYG	n/a	n/a	V4D818
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	7.6	ug/l	
71-43-2	Benzene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
108-88-3	Toluene	ND	1.0	0.15	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		77-120%
17060-07-0	1,2-Dichloroethane-D4	113%		70-127%
2037-26-5	Toluene-D8	110%		79-120%
460-00-4	4-Bromofluorobenzene	105%		76-118%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Raw Data: GH85712.D

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	EB120611		
Lab Sample ID:	JA93967-5	**Date Sampled:**	12/06/11
Matrix:	AQ - Equipment Blank	**Date Received:**	12/07/11
Method:	SW846-8015 (DAI)	**Percent Solids:**	n/a
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH85712.D	2	12/08/11	XPL	n/a	n/a	GGH3916
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	ND	100	30	ug/l	
67-56-1	Methanol	ND	200	46	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	78%		48-150%
111-27-3	Hexanol	69%		48-150%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	FB120611		
Lab Sample ID:	JA93967-6	**Date Sampled:**	12/06/11
Matrix:	AQ - Field Blank Soil	**Date Received:**	12/07/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D18513.D	1	12/08/11	TYG	n/a	n/a	V4D818
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	7.6	ug/l	
71-43-2	Benzene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
108-88-3	Toluene	ND	1.0	0.15	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		77-120%
17060-07-0	1,2-Dichloroethane-D4	113%		70-127%
2037-26-5	Toluene-D8	110%		79-120%
460-00-4	4-Bromofluorobenzene	105%		76-118%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	FB120611		
Lab Sample ID:	JA93967-6	**Date Sampled:**	12/06/11
Matrix:	AQ - Field Blank Soil	**Date Received:**	12/07/11
Method:	SW846-8015 (DAI)	**Percent Solids:**	n/a
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH85713.D	2	12/08/11	XPL	n/a	n/a	GGH3916
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	ND	100	30	ug/l	
67-56-1	Methanol	ND	200	46	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	91%		48-150%
111-27-3	Hexanol	86%		48-150%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Raw Data: 4D18514.D

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	TB120611		
Lab Sample ID:	JA93967-7	**Date Sampled:**	12/06/11
Matrix:	AQ - Trip Blank Soil	**Date Received:**	12/07/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D18514.D	1	12/08/11	TYG	n/a	n/a	V4D818
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	7.6	ug/l	
71-43-2	Benzene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
108-88-3	Toluene	ND	1.0	0.15	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		77-120%
17060-07-0	1,2-Dichloroethane-D4	115%		70-127%
2037-26-5	Toluene-D8	110%		79-120%
460-00-4	4-Bromofluorobenzene	106%		76-118%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Raw Data: GH85714.D

Accutest LabLink@649183 09:00 19-Dec-2011

Report of Analysis

Client Sample ID:	TB120611		
Lab Sample ID:	JA93967-7	**Date Sampled:**	12/06/11
Matrix:	AQ - Trip Blank Soil	**Date Received:**	12/07/11
Method:	SW846-8015 (DAI)	**Percent Solids:**	n/a
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH85714.D	2	12/08/11	XPL	n/a	n/a	GGH3916
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	ND	100	30	ug/l	
67-56-1	Methanol	ND	200	46	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	89%		48-150%
111-27-3	Hexanol	82%		48-150%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

SLL
FB
WTB

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
Tel: 732-329-0200 FAX: 732-329-3499/3480
www. acutest.com

PAGE 1 OF 1

FED-EX Tracking #	Bottle Order Control #
8737 4421 1914	
Accutest Quote #	Accutest Job #
	JA93967

Client / Reporting Information

- Company Name: Anderson Mulholland Assoc., Inc.
- Street Address: 110 Corporate Park
- City / State / Zip: White Plains, NY 10604
- Project Contact / E-mail: 914-251-0400 Ext. 309
- Phone # / Fax #: Terry Taylor
- Sampler(s) Name(s) / Phone #: Terry Taylor/Nestor Rivera

Project Information

- Project Name: Bristol-Myers Squibb, Humacao PR
- Street:
- City / State:
- Project #: Building 5
- Client Purchase Order #:
- Project Manager:

Billing Information (if different from Report to)

- Company Name:
- Street Address:
- City / State / Zip:
- Attention:

Requested Analysis (see TEST CODE sheet): Ethylbenzene, benzene, toluene, xylene, MIBK, acetone by 8260B; Methanol and IPA by 8015B; % Solids

Matrix Codes: DW - Drinking Water, GW - Ground Water, WW - Water, SW - Surface Water, SO - Soil, SL - Sludge, SED-Sediment, OI - Oil, LIQ - Other Liquid, AIR - Air, SOL - Other Solid, WP - Wipe, FB-Field Blank, EB-Equipment Blank, RB- Rinse Blank, TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Ethylbenzene, benzene, toluene, xylene, MIBK, acetone by 8260B	Methanol and IPA by 8015B	% Solids	LAB USE ONLY
-1	I-6 (8.5-9.5)		12/6/11	1000	TT	Soil	5					2			3	X	X	X	F.S.1
-2	I-5 (9-10)			1100			5					2			3	X	X	X	1404
-3	I-4 (5-6)			1145			5					2			3	X	X	X	4965
-4	I-4 (5-6) D			1145			4					1			3	X	X		985
-5	EB 120611			1200			2	2								X	X		
-6	FB 120611			1145			2	2								X	X		
-7	TB 120611			1200			3	3								X	X		

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [x] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

873744211914

Allco 11-28-11 EDD 12-7-11

3enory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	12/6/2011	1 FED EX	2 FED EX	12-7-11 1715	2 [signature]
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # 936	[x] Intact [ ] Not intact	Preserved where applicable [x] / On Ice [x] / Cooler Temp. 3.0° CB

Cu

4.1

4

JA93967: Chain of Custody
Page 1 of 2

ACCUTEST LABORATORIES

Accutest Laboratories Sample Receipt Summary

Accutest Job Number JA93967 **Client:**

Date / Time Received: 12/7/2011 **Project:**

No. Coolers: 1 **Airbill #'s:** **Delivery Method:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Bar Therm		
3. Cooler media:	Ice (Bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JA93967: Chain of Custody
Page 2 of 2

New Jersey
ACCUTEST
LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Raw Data: D190152.D

Method Blank Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD7741-MB	D190152.D	1	12/09/11	ET	n/a	n/a	VD7741

The QC reported here applies to the following samples: **Method:** SW846 8260B

JA93967-3, JA93967-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	500	330	ug/kg	
71-43-2	Benzene	ND	50	6.7	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	90%	67-131%
17060-07-0	1,2-Dichloroethane-D4	91%	66-130%
2037-26-5	Toluene-D8	99%	76-125%
460-00-4	4-Bromofluorobenzene	85%	53-142%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Raw Data: D190225.D

Method Blank Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD7744-MB	D190225.D	1	12/12/11	ET	n/a	n/a	VD7744

The QC reported here applies to the following samples: **Method:** SW846 8260B

JA93967-3, JA93967-4

CAS No.	Compound	Result	RL	MDL	Units	Q
100-41-4	Ethylbenzene	ND	50	7.4	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	250	130	ug/kg	
108-88-3	Toluene	ND	50	19	ug/kg	
1330-20-7	Xylene (total)	ND	50	9.2	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	67-131%
17060-07-0	1,2-Dichloroethane-D4	98%	66-130%
2037-26-5	Toluene-D8	108%	76-125%
460-00-4	4-Bromofluorobenzene	97%	53-142%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Raw Data: 4D18499.D

Blank Spike Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4D818-BS	4D18499.D	1	12/08/11	TYG	n/a	n/a	V4D818

The QC reported here applies to the following samples: **Method:** SW846 8260B

JA93967-5, JA93967-6, JA93967-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	29.8	60	49-142
71-43-2	Benzene	50	46.8	94	76-119
100-41-4	Ethylbenzene	50	50.0	100	77-119
108-10-1	4-Methyl-2-pentanone(MIBK)	50	42.7	85	68-131
108-88-3	Toluene	50	49.6	99	77-122
1330-20-7	Xylene (total)	150	151	101	78-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	108%	77-120%
17060-07-0	1,2-Dichloroethane-D4	116%	70-127%
2037-26-5	Toluene-D8	112%	79-120%
460-00-4	4-Bromofluorobenzene	103%	76-118%

Raw Data: Y118302.D

Blank Spike Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY5054-BS	Y118302.D	1	12/08/11	RS	n/a	n/a	VY5054

The QC reported here applies to the following samples: **Method:** SW846 8260B

JA93967-1, JA93967-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	50	39.2	78	48-154
71-43-2	Benzene	50	50.8	102	76-120
100-41-4	Ethylbenzene	50	52.3	105	75-125
108-10-1	4-Methyl-2-pentanone(MIBK)	50	54.0	108	69-135
108-88-3	Toluene	50	51.8	104	77-124
1330-20-7	Xylene (total)	150	157	105	78-124

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	91%	67-131%
17060-07-0	1,2-Dichloroethane-D4	86%	66-130%
2037-26-5	Toluene-D8	100%	76-125%
460-00-4	4-Bromofluorobenzene	92%	53-142%

Raw Data: D190153.D

Blank Spike Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD7741-BS	D190153.D	1	12/09/11	ET	n/a	n/a	VD7741

The QC reported here applies to the following samples: **Method:** SW846 8260B

JA93967-3, JA93967-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	2500	2590	104	48-154
71-43-2	Benzene	2500	2470	99	76-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	67-131%
17060-07-0	1,2-Dichloroethane-D4	91%	66-130%
2037-26-5	Toluene-D8	98%	76-125%
460-00-4	4-Bromofluorobenzene	83%	53-142%

Raw Data: D190226.D

Blank Spike Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VD7744-BS	D190226.D	1	12/12/11	ET	n/a	n/a	VD7744

The QC reported here applies to the following samples: **Method:** SW846 8260B

JA93967-3, JA93967-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
100-41-4	Ethylbenzene	2500	2360	94	75-125
108-10-1	4-Methyl-2-pentanone(MIBK)	2500	2380	95	69-135
108-88-3	Toluene	2500	2360	94	77-124
1330-20-7	Xylene (total)	7500	7050	94	78-124

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	67-131%
17060-07-0	1,2-Dichloroethane-D4	96%	66-130%
2037-26-5	Toluene-D8	107%	76-125%
460-00-4	4-Bromofluorobenzene	93%	53-142%

Raw Data: 4D18508.D 4D18509.D

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JA93129-1MS	4D18508.D	1	12/08/11	TYG	n/a	n/a	V4D818
JA93129-1MSD	4D18509.D	1	12/08/11	TYG	n/a	n/a	V4D818
JA93129-1	4D18506.D	1	12/08/11	TYG	n/a	n/a	V4D818

The QC reported here applies to the following samples: **Method:** SW846 8260B

JA93967-5, JA93967-6, JA93967-7

CAS No.	Compound	JA93129-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50	28.8	58	30.1	60	4	39-150/20
71-43-2	Benzene	ND		50	45.9	92	45.9	92	0	40-139/12
100-41-4	Ethylbenzene	ND		50	48.5	97	48.6	97	0	40-140/12
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50	42.6	85	43.4	87	2	61-138/14
108-88-3	Toluene	ND		50	47.3	95	48.2	96	2	47-140/12
1330-20-7	Xylene (total)	ND		150	147	98	147	98	0	42-140/12

CAS No.	Surrogate Recoveries	MS	MSD	JA93129-1	Limits
1868-53-7	Dibromofluoromethane	109%	108%	110%	77-120%
17060-07-0	1,2-Dichloroethane-D4	114%	113%	119%	70-127%
2037-26-5	Toluene-D8	111%	111%	109%	79-120%
460-00-4	4-Bromofluorobenzene	104%	106%	106%	76-118%

Raw Data: Y118306.D Y118307.D

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JA93656-19MS	Y118306.D	1	12/08/11	RS	n/a	n/a	VY5054
JA93656-19MSD	Y118307.D	1	12/08/11	RS	n/a	n/a	VY5054
JA93656-19	Y118309.D	1	12/08/11	RS	n/a	n/a	VY5054

The QC reported here applies to the following samples: **Method:** SW846 8260B

JA93967-1, JA93967-2

CAS No.	Compound	JA93656-19 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		50.5	28.7	57	25.8	50	11	12-189/33
71-43-2	Benzene	ND		50.5	35.3	70	35.4	69	0	37-132/21
100-41-4	Ethylbenzene	ND		50.5	34.3	68	36.3	71	6	20-144/25
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		50.5	60.1	119	53.6	104	11	36-145/26
108-88-3	Toluene	ND		50.5	35.1	69	35.6	69	1	29-138/23
1330-20-7	Xylene (total)	ND		152	107	71	112	73	5	18-145/25

CAS No.	Surrogate Recoveries	MS	MSD	JA93656-19	Limits
1868-53-7	Dibromofluoromethane	93%	93%	92%	67-131%
17060-07-0	1,2-Dichloroethane-D4	98%	90%	92%	66-130%
2037-26-5	Toluene-D8	100%	98%	98%	76-125%
460-00-4	4-Bromofluorobenzene	92%	92%	90%	53-142%

Raw Data: D190154.D D190155.D

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JA93508-5MS	D190154.D	1	12/10/11	ET	n/a	n/a	VD7741
JA93508-5MSD	D190155.D	1	12/10/11	ET	n/a	n/a	VD7741
JA93508-5	D190157.D	1	12/10/11	ET	n/a	n/a	VD7741

The QC reported here applies to the following samples: **Method:** SW846 8260B

JA93967-3, JA93967-4

CAS No.	Compound	JA93508-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		5700	5310	93	5560	98	5	12-189/33
71-43-2	Benzene	ND		5700	5500	96	5540	97	1	37-132/21

CAS No.	Surrogate Recoveries	MS	MSD	JA93508-5	Limits
1868-53-7	Dibromofluoromethane	92%	93%	90%	67-131%
17060-07-0	1,2-Dichloroethane-D4	89%	91%	91%	66-130%
2037-26-5	Toluene-D8	98%	97%	98%	76-125%
460-00-4	4-Bromofluorobenzene	83%	83%	85%	53-142%

Raw Data: D190234.D D190235.D

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JA94317-2MS	D190234.D	1	12/12/11	ET	n/a	n/a	VD7744
JA94317-2MSD	D190235.D	1	12/12/11	ET	n/a	n/a	VD7744
JA94317-2	D190229.D	1	12/12/11	ET	n/a	n/a	VD7744

The QC reported here applies to the following samples: **Method:** SW846 8260B

JA93967-3, JA93967-4

CAS No.	Compound	JA94317-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
100-41-4	Ethylbenzene	ND		3310	3370	102	3450	104	2	20-144/25
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		3310	3200	97	3190	96	0	36-145/26
108-88-3	Toluene	ND		3310	3460	105	3540	107	2	29-138/23
1330-20-7	Xylene (total)	ND		9930	9920	100	10200	103	3	18-145/25

CAS No.	Surrogate Recoveries	MS	MSD	JA94317-2	Limits
1868-53-7	Dibromofluoromethane	102%	101%	100%	67-131%
17060-07-0	1,2-Dichloroethane-D4	100%	100%	100%	66-130%
2037-26-5	Toluene-D8	111%	111%	110%	76-125%
460-00-4	4-Bromofluorobenzene	99%	96%	99%	53-142%

Raw Data: 4D16543.D

Instrument Performance Check (BFB)

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample:	V4D729-BFB	**Injection Date:**	10/20/11
Lab File ID:	4D16543.D	**Injection Time:**	10:45
Instrument ID:	GCMS4D		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	12898	16.0		Pass
75	30.0 - 60.0% of mass 95	35421	44.0		Pass
95	Base peak, 100% relative abundance	80459	100.0		Pass
96	5.0 - 9.0% of mass 95	5234	6.51		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	75200	93.5		Pass
175	5.0 - 9.0% of mass 174	5740	7.13	(7.63) [a]	Pass
176	95.0 - 101.0% of mass 174	73344	91.2	(97.5) [a]	Pass
177	5.0 - 9.0% of mass 176	4694	5.83	(6.40) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4D729-IC729	4D16544.D	10/20/11	11:17	00:32	Initial cal 0.5
V4D729-IC729	4D16546.D	10/20/11	12:16	01:31	Initial cal 2
V4D729-IC729	4D16547.D	10/20/11	12:45	02:00	Initial cal 5
V4D729-IC729	4D16548.D	10/20/11	13:14	02:29	Initial cal 10
V4D729-IC729	4D16549.D	10/20/11	13:44	02:59	Initial cal 20
V4D729-ICC729	4D16550.D	10/20/11	14:13	03:28	Initial cal 50
V4D729-ICV729	4D16551.D	10/20/11	14:43	03:58	Initial cal verification 50
V4D729-IC729	4D16552.D	10/20/11	15:12	04:27	Initial cal 100
V4D729-IC729	4D16556.D	10/20/11	17:10	06:25	Initial cal 1

Instrument Performance Check (BFB)

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample: V4D818-BFB
Lab File ID: 4D18495.D
Instrument ID: GCMS4D
Injection Date: 12/08/11
Injection Time: 08:21

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	11926	17.4		Pass
75	30.0 - 60.0% of mass 95	32299	47.2		Pass
95	Base peak, 100% relative abundance	68475	100.0		Pass
96	5.0 - 9.0% of mass 95	4541	6.63		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	67261	98.2		Pass
175	5.0 - 9.0% of mass 174	5387	7.87	(8.01) [a]	Pass
176	95.0 - 101.0% of mass 174	66189	96.7	(98.4) [a]	Pass
177	5.0 - 9.0% of mass 176	4205	6.14	(6.35) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4D818-CC729	4D18496.D	12/08/11	08:58	00:37	Continuing cal 20
V4D818-MB	4D18498.D	12/08/11	10:12	01:51	Method Blank
V4D818-BS	4D18499.D	12/08/11	10:45	02:24	Blank Spike
ZZZZZZ	4D18500.D	12/08/11	11:19	02:58	(unrelated sample)
ZZZZZZ	4D18501.D	12/08/11	11:48	03:27	(unrelated sample)
ZZZZZZ	4D18502.D	12/08/11	12:18	03:57	(unrelated sample)
ZZZZZZ	4D18503.D	12/08/11	12:47	04:26	(unrelated sample)
ZZZZZZ	4D18504.D	12/08/11	13:17	04:56	(unrelated sample)
ZZZZZZ	4D18505.D	12/08/11	13:46	05:25	(unrelated sample)
JA93129-1	4D18506.D	12/08/11	14:17	05:56	(used for QC only; not part of job JA93967)
ZZZZZZ	4D18507.D	12/08/11	14:46	06:25	(unrelated sample)
JA93129-1MS	4D18508.D	12/08/11	15:15	06:54	Matrix Spike
JA93129-1MSD	4D18509.D	12/08/11	15:45	07:24	Matrix Spike Duplicate
ZZZZZZ	4D18510.D	12/08/11	16:14	07:53	(unrelated sample)
ZZZZZZ	4D18511.D	12/08/11	16:44	08:23	(unrelated sample)
JA93967-5	4D18512.D	12/08/11	17:13	08:52	EB120611
JA93967-6	4D18513.D	12/08/11	17:42	09:21	FB120611
JA93967-7	4D18514.D	12/08/11	18:12	09:51	TB120611
ZZZZZZ	4D18515.D	12/08/11	18:41	10:20	(unrelated sample)
ZZZZZZ	4D18516.D	12/08/11	19:11	10:50	(unrelated sample)
ZZZZZZ	4D18517.D	12/08/11	19:40	11:19	(unrelated sample)
ZZZZZZ	4D18518.D	12/08/11	20:09	11:48	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample:	VD7671-BFB	**Injection Date:**	10/28/11
Lab File ID:	D188518.D	**Injection Time:**	08:53
Instrument ID:	GCMSD		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	14760	17.8		Pass
75	30.0 - 60.0% of mass 95	39411	47.5		Pass
95	Base peak, 100% relative abundance	83021	100.0		Pass
96	5.0 - 9.0% of mass 95	5575	6.72		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	67379	81.2		Pass
175	5.0 - 9.0% of mass 174	5024	6.05	(7.46) [a]	Pass
176	95.0 - 101.0% of mass 174	65571	79.0	(97.3) [a]	Pass
177	5.0 - 9.0% of mass 176	4276	5.15	(6.52) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VD7671-IC7671	D188519.D	10/28/11	09:24	00:31	Initial cal 0.5
VD7671-IC7671	D188520.D	10/28/11	09:53	01:00	Initial cal 1
VD7671-IC7671	D188521.D	10/28/11	10:23	01:30	Initial cal 2
VD7671-IC7671	D188522.D	10/28/11	10:52	01:59	Initial cal 5
VD7671-IC7671	D188523.D	10/28/11	11:22	02:29	Initial cal 10
VD7671-IC7671	D188524.D	10/28/11	11:51	02:58	Initial cal 20
VD7671-ICC7671	D188525.D	10/28/11	12:20	03:27	Initial cal 50
VD7671-ICV7671	D188526.D	10/28/11	12:50	03:57	Initial cal verification 50
VD7671-IC7671	D188527.D	10/28/11	13:19	04:26	Initial cal 100
VD7671-IC7671	D188528.D	10/28/11	13:48	04:55	Initial cal 200
VD7671-MB	D188531.D	10/28/11	15:33	06:40	Method Blank
VD7671-BS	D188532.D	10/28/11	16:15	07:22	Blank Spike
JA89370-5	D188534.D	10/28/11	17:31	08:38	(used for QC only; not part of job JA93967)
ZZZZZZ	D188535.D	10/28/11	18:05	09:12	(unrelated sample)
JA89370-5MS	D188536.D	10/28/11	18:41	09:48	Matrix Spike
JA89370-5MSD	D188537.D	10/28/11	19:13	10:20	Matrix Spike Duplicate

Instrument Performance Check (BFB)

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample:	VD7741-BFB	**Injection Date:**	12/09/11
Lab File ID:	D190149.D	**Injection Time:**	21:46
Instrument ID:	GCMSD		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	19901	18.3		Pass
75	30.0 - 60.0% of mass 95	52181	47.9		Pass
95	Base peak, 100% relative abundance	108885	100.0		Pass
96	5.0 - 9.0% of mass 95	7510	6.90		Pass
173	Less than 2.0% of mass 174	666	0.61	(0.72) [a]	Pass
174	50.0 - 120.0% of mass 95	92640	85.1		Pass
175	5.0 - 9.0% of mass 174	6913	6.35	(7.46) [a]	Pass
176	95.0 - 101.0% of mass 174	90240	82.9	(97.4) [a]	Pass
177	5.0 - 9.0% of mass 176	6111	5.61	(6.77) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VD7741-CC7671	D190150.D	12/09/11	22:16	00:30	Continuing cal 50
VD7741-MB	D190152.D	12/09/11	23:16	01:30	Method Blank
VD7741-BS	D190153.D	12/09/11	23:45	01:59	Blank Spike
JA93508-5MS	D190154.D	12/10/11	00:15	02:29	Matrix Spike
JA93508-5MSD	D190155.D	12/10/11	00:45	02:59	Matrix Spike Duplicate
JA93508-5	D190157.D	12/10/11	01:44	03:58	(used for QC only; not part of job JA93967)
JA93967-3	D190158.D	12/10/11	02:14	04:28	I-4 (5-6)
JA93967-4	D190159.D	12/10/11	02:44	04:58	I-4 (5-6)D
ZZZZZZ	D190160.D	12/10/11	03:14	05:28	(unrelated sample)
ZZZZZZ	D190161.D	12/10/11	03:44	05:58	(unrelated sample)
ZZZZZZ	D190162.D	12/10/11	04:13	06:27	(unrelated sample)
ZZZZZZ	D190163.D	12/10/11	04:43	06:57	(unrelated sample)
ZZZZZZ	D190164.D	12/10/11	05:13	07:27	(unrelated sample)
ZZZZZZ	D190165.D	12/10/11	05:43	07:57	(unrelated sample)
ZZZZZZ	D190166.D	12/10/11	06:13	08:27	(unrelated sample)
ZZZZZZ	D190167.D	12/10/11	06:43	08:57	(unrelated sample)
ZZZZZZ	D190168.D	12/10/11	07:13	09:27	(unrelated sample)
ZZZZZZ	D190169.D	12/10/11	07:42	09:56	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample:	VD7744-BFB	**Injection Date:**	12/12/11
Lab File ID:	D190222.D	**Injection Time:**	08:48
Instrument ID:	GCMSD		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	23136	17.8		Pass
75	30.0 - 60.0% of mass 95	61499	47.3		Pass
95	Base peak, 100% relative abundance	129888	100.0		Pass
96	5.0 - 9.0% of mass 95	9085	6.99		Pass
173	Less than 2.0% of mass 174	836	0.64	(0.76) [a]	Pass
174	50.0 - 120.0% of mass 95	110608	85.2		Pass
175	5.0 - 9.0% of mass 174	8095	6.23	(7.32) [a]	Pass
176	95.0 - 101.0% of mass 174	107624	82.9	(97.3) [a]	Pass
177	5.0 - 9.0% of mass 176	7225	5.56	(6.71) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VD7744-CC7671	D190223.D	12/12/11	09:23	00:35	Continuing cal 20
VD7744-MB	D190225.D	12/12/11	10:36	01:48	Method Blank
VD7744-BS	D190226.D	12/12/11	11:17	02:29	Blank Spike
JA93967-3	D190227.D	12/12/11	11:57	03:09	I-4 (5-6)
JA93967-4	D190228.D	12/12/11	12:26	03:38	I-4 (5-6)D
JA94317-2	D190229.D	12/12/11	12:56	04:08	(used for QC only; not part of job JA93967)
ZZZZZZ	D190230.D	12/12/11	13:26	04:38	(unrelated sample)
ZZZZZZ	D190231.D	12/12/11	13:55	05:07	(unrelated sample)
ZZZZZZ	D190232.D	12/12/11	14:25	05:37	(unrelated sample)
ZZZZZZ	D190233.D	12/12/11	14:55	06:07	(unrelated sample)
JA94317-2MS	D190234.D	12/12/11	15:24	06:36	Matrix Spike
JA94317-2MSD	D190235.D	12/12/11	15:54	07:06	Matrix Spike Duplicate
ZZZZZZ	D190236.D	12/12/11	16:23	07:35	(unrelated sample)
ZZZZZZ	D190237.D	12/12/11	16:53	08:05	(unrelated sample)
ZZZZZZ	D190238.D	12/12/11	17:22	08:34	(unrelated sample)
ZZZZZZ	D190239.D	12/12/11	17:52	09:04	(unrelated sample)
ZZZZZZ	D190240.D	12/12/11	18:21	09:33	(unrelated sample)
ZZZZZZ	D190241.D	12/12/11	18:51	10:03	(unrelated sample)
ZZZZZZ	D190242.D	12/12/11	19:20	10:32	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample: VY5012-BFB
Lab File ID: Y117399.D
Instrument ID: GCMSY
Injection Date: 11/08/11
Injection Time: 10:04

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	6146	16.1		Pass
75	30.0 - 60.0% of mass 95	15862	41.5		Pass
95	Base peak, 100% relative abundance	38181	100.0		Pass
96	5.0 - 9.0% of mass 95	2326	6.09		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	39146	102.5		Pass
175	5.0 - 9.0% of mass 174	3125	8.18	(7.98) [a]	Pass
176	95.0 - 101.0% of mass 174	37658	98.6	(96.2) [a]	Pass
177	5.0 - 9.0% of mass 176	2411	6.31	(6.40) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VY5012-IC5012	Y117400.D	11/08/11	10:48	00:44	Initial cal 10
VY5012-IC5012	Y117401.D	11/08/11	11:18	01:14	Initial cal 2
VY5012-IC5012	Y117402.D	11/08/11	11:48	01:44	Initial cal 1
VY5012-IC5012	Y117403.D	11/08/11	12:19	02:15	Initial cal 0.5
VY5012-ICC5012	Y117404.D	11/08/11	12:49	02:45	Initial cal 50
VY5012-IC5012	Y117405.D	11/08/11	13:19	03:15	Initial cal 5
VY5012-IC5012	Y117406.D	11/08/11	13:49	03:45	Initial cal 20
VY5012-IC5012	Y117408.D	11/08/11	15:29	05:25	Initial cal 100
VY5012-IC5012	Y117409.D	11/08/11	15:59	05:55	Initial cal 200
VY5012-IC5012	Y117410.D	11/08/11	16:29	06:25	Initial cal 75
VY5012-ICV5012	Y117411.D	11/08/11	17:48	07:44	Initial cal verification 50

Raw Data: Y118299.D

Instrument Performance Check (BFB)

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample:	VY5054-BFB	**Injection Date:**	12/08/11
Lab File ID:	Y118299.D	**Injection Time:**	10:51
Instrument ID:	GCMSY		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	7258	15.8		Pass
75	30.0 - 60.0% of mass 95	19498	42.5		Pass
95	Base peak, 100% relative abundance	45842	100.0		Pass
96	5.0 - 9.0% of mass 95	3156	6.88		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	48669	106.2		Pass
175	5.0 - 9.0% of mass 174	4249	9.27	(8.73) [a]	Pass
176	95.0 - 101.0% of mass 174	48034	104.8	(98.7) [a]	Pass
177	5.0 - 9.0% of mass 176	3048	6.65	(6.35) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VY5054-CC5012	Y118300.D	12/08/11	11:33	00:42	Continuing cal 20
VY5054-MB	Y118301.D	12/08/11	12:10	01:19	Method Blank
VY5054-BS	Y118302.D	12/08/11	12:54	02:03	Blank Spike
ZZZZZZ	Y118304.D	12/08/11	14:14	03:23	(unrelated sample)
ZZZZZZ	Y118305.D	12/08/11	14:45	03:54	(unrelated sample)
JA93656-19MS	Y118306.D	12/08/11	15:18	04:27	Matrix Spike
JA93656-19MSD	Y118307.D	12/08/11	15:48	04:57	Matrix Spike Duplicate
JA93656-19	Y118309.D	12/08/11	16:49	05:58	(used for QC only; not part of job JA93967)
ZZZZZZ	Y118310.D	12/08/11	17:19	06:28	(unrelated sample)
ZZZZZZ	Y118311.D	12/08/11	17:49	06:58	(unrelated sample)
ZZZZZZ	Y118312.D	12/08/11	18:20	07:29	(unrelated sample)
ZZZZZZ	Y118313.D	12/08/11	18:50	07:59	(unrelated sample)
ZZZZZZ	Y118314.D	12/08/11	19:20	08:29	(unrelated sample)
JA93967-1	Y118315.D	12/08/11	19:50	08:59	I-6 (8.5-9.5)
JA93967-2	Y118316.D	12/08/11	20:20	09:29	I-5 (9-10)
ZZZZZZ	Y118317.D	12/08/11	20:50	09:59	(unrelated sample)
ZZZZZZ	Y118318.D	12/08/11	21:20	10:29	(unrelated sample)
ZZZZZZ	Y118319.D	12/08/11	21:50	10:59	(unrelated sample)
ZZZZZZ	Y118320.D	12/08/11	22:20	11:29	(unrelated sample)
ZZZZZZ	Y118321.D	12/08/11	22:50	11:59	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Check Std:	V4D818-CC729	**Injection Date:**	12/08/11
Lab File ID:	4D18496.D	**Injection Time:**	08:58
Instrument ID:	GCMS4D	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	148830	7.40	289590	9.97	416428	10.93	384653	14.29	222499	16.69
Upper Limit [a]	297660	7.90	579180	10.47	832856	11.43	769306	14.79	444998	17.19
Lower Limit [b]	74415	6.90	144795	9.47	208214	10.43	192327	13.79	111250	16.19
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**
V4D818-MB	137338	7.39	282518	9.97	400735	10.92	369481	14.28	208159	16.69
V4D818-BS	138280	7.41	277822	9.97	395526	10.93	372366	14.29	215580	16.69
ZZZZZZ	147739	7.40	282686	9.97	393992	10.93	362851	14.29	205222	16.69
ZZZZZZ	124260	7.39	264122	9.96	374643	10.92	347255	14.28	193811	16.69
ZZZZZZ	125115	7.39	273761	9.97	387459	10.92	360912	14.28	202247	16.69
ZZZZZZ	128810	7.40	266977	9.97	384659	10.92	357381	14.28	203793	16.69
ZZZZZZ	125714	7.40	260462	9.97	373509	10.92	345895	14.28	195730	16.69
ZZZZZZ	129376	7.40	265736	9.97	372220	10.92	342615	14.28	191264	16.69
JA93129-1	126977	7.39	255832	9.97	362503	10.92	339159	14.28	188794	16.69
ZZZZZZ	123120	7.40	251773	9.97	359965	10.92	336944	14.28	187192	16.69
JA93129-1MS	143110	7.40	288361	9.97	414278	10.92	390751	14.28	222462	16.69
JA93129-1MSD	145435	7.40	291548	9.97	417578	10.92	394374	14.29	223579	16.69
ZZZZZZ	141964	7.39	295168	9.97	425507	10.92	393974	14.28	221351	16.69
ZZZZZZ	153260	7.40	315247	9.97	440657	10.92	420374	14.29	236588	16.69
JA93967-5	147839	7.39	302272	9.97	435861	10.92	405905	14.28	226681	16.69
JA93967-6	143346	7.39	300210	9.97	425560	10.92	399048	14.28	220330	16.69
JA93967-7	137679	7.39	283516	9.97	404335	10.92	375387	14.28	209165	16.69
ZZZZZZ	134743	7.40	269814	9.97	383081	10.92	362293	14.28	202208	16.69
ZZZZZZ	131225	7.39	263686	9.97	372174	10.92	353232	14.28	206305	16.69
ZZZZZZ	151903	7.40	318096	9.97	453016	10.92	420592	14.28	231802	16.69
ZZZZZZ	147719	7.39	315181	9.97	451302	10.92	421057	14.28	232858	16.69

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Check Std:	VD7741-CC7671	**Injection Date:**	12/09/11
Lab File ID:	D190150.D	**Injection Time:**	22:16
Instrument ID:	GCMSD	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	156379	7.51	275224	9.75	445509	10.66	450384	13.99	268919	16.58
Upper Limit [a]	312758	8.01	550448	10.25	891018	11.16	900768	14.49	537838	17.08
Lower Limit [b]	78190	7.01	137612	9.25	222755	10.16	225192	13.49	134460	16.08
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**
VD7741-MB	155931	7.53	276435	9.75	438424	10.65	468468	13.99	261391	16.58
VD7741-BS	167485	7.51	283985	9.75	459938	10.65	474930	13.99	275459	16.58
JA93508-5MS	159994	7.53	275690	9.75	444748	10.65	455781	13.99	269286	16.58
JA93508-5MSD	156877	7.53	272608	9.75	438791	10.65	441505	13.99	266307	16.58
JA93508-5	149042	7.53	264665	9.75	424368	10.66	440361	13.99	256265	16.58
JA93967-3	156272	7.51	271803	9.76	435827	10.66	449200	13.99	257648	16.58
JA93967-4	156468	7.51	264406	9.76	421215	10.66	460606	13.99	261586	16.58
ZZZZZZ	162368	7.51	271542	9.76	438739	10.66	452300	13.99	272582	16.58
ZZZZZZ	166572	7.51	285460	9.75	456588	10.66	489093	13.99	284474	16.58
ZZZZZZ	164178	7.51	274461	9.76	441634	10.66	466802	13.99	267713	16.58
ZZZZZZ	159100	7.53	270456	9.75	433782	10.65	449285	13.99	267363	16.58
ZZZZZZ	163216	7.51	271849	9.76	439486	10.66	476080	13.99	272545	16.58
ZZZZZZ	164531	7.51	271684	9.75	437657	10.66	457968	13.99	273987	16.57
ZZZZZZ	167188	7.51	271667	9.75	432413	10.66	460219	13.99	274691	16.58
ZZZZZZ	157769	7.53	270133	9.75	435379	10.65	457866	13.99	272484	16.58
ZZZZZZ	162309	7.52	274794	9.75	445069	10.66	470530	13.99	264924	16.58
ZZZZZZ	156822	7.53	269232	9.75	431201	10.66	447566	13.99	272432	16.58

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Check Std:	VD7744-CC7671	**Injection Date:**	12/12/11
Lab File ID:	D190223.D	**Injection Time:**	09:23
Instrument ID:	GCMSD	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	155943	7.50	296783	9.75	445013	10.65	439834	13.99	270347	16.57
Upper Limit [a]	311886	8.00	593566	10.25	890026	11.15	879668	14.49	540694	17.07
Lower Limit [b]	77972	7.00	148392	9.25	222507	10.15	219917	13.49	135174	16.07
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**
VD7744-MB	134903	7.52	279076	9.75	426191	10.65	425693	13.99	245587	16.57
VD7744-BS	151704	7.51	291565	9.75	444894	10.65	424827	13.99	256742	16.57
JA93967-3	144181	7.51	288513	9.75	448190	10.66	483399	13.99	261707	16.58
JA93967-4	138677	7.51	273213	9.75	419202	10.66	433028	13.99	239830	16.58
JA94317-2	134292	7.52	271229	9.75	423037	10.66	425822	13.99	238803	16.58
ZZZZZZ	141200	7.57	267162	9.75	407086	10.65	420473	13.99	255689	16.57
ZZZZZZ	152331	7.51	267625	9.75	410881	10.66	437177	13.99	264298	16.58
ZZZZZZ	150185	7.51	273075	9.75	421018	10.65	432274	13.99	253803	16.58
ZZZZZZ	152244	7.51	280720	9.75	434515	10.66	453943	13.99	260785	16.58
JA94317-2MS	148983	7.53	280673	9.75	441046	10.65	440203	13.99	253679	16.58
JA94317-2MSD	149589	7.53	277083	9.75	436677	10.66	428349	13.99	251601	16.57
ZZZZZZ	146859	7.53	272360	9.75	427862	10.65	433187	13.99	246105	16.58
ZZZZZZ	145478	7.52	277068	9.75	433580	10.66	450682	13.99	249119	16.58
ZZZZZZ	146987	7.52	278286	9.75	427011	10.66	428975	13.99	242345	16.58
ZZZZZZ	147855	7.51	267870	9.75	410183	10.66	434087	13.99	242680	16.58
ZZZZZZ	145556	7.52	269679	9.75	419867	10.65	435130	13.99	269075	16.58
ZZZZZZ	144388	7.53	271072	9.75	424953	10.66	433430	13.99	268419	16.58
ZZZZZZ	149341	7.52	276254	9.75	433227	10.65	444089	13.99	270174	16.58

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Check Std:	VY5054-CC5012	**Injection Date:**	12/08/11
Lab File ID:	Y118300.D	**Injection Time:**	11:33
Instrument ID:	GCMSY	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	52323	7.69	183803	9.86	247556	10.78	194333	13.86	92643	16.14
Upper Limit [a]	104646	8.19	367606	10.36	495112	11.28	388666	14.36	185286	16.64
Lower Limit [b]	26162	7.19	91902	9.36	123778	10.28	97167	13.36	46322	15.64

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VY5054-MB	55911	7.70	190096	9.86	254776	10.78	200070	13.86	95388	16.14
VY5054-BS	52878	7.70	179518	9.86	243378	10.78	191705	13.86	90594	16.14
ZZZZZZ	71066	7.70	209725	9.86	279450	10.78	212477	13.87	101578	16.14
ZZZZZZ	71382	7.70	201282	9.86	269220	10.78	205679	13.87	96059	16.14
JA93656-19MS	67772	7.70	185833	9.86	252583	10.78	202427	13.87	97815	16.14
JA93656-19MSD	62781	7.70	200718	9.86	272842	10.78	214174	13.87	102525	16.14
JA93656-19	56561	7.70	203639	9.87	273222	10.78	208980	13.87	100334	16.14
ZZZZZZ	51768	7.71	198189	9.86	263790	10.78	204436	13.87	96303	16.14
ZZZZZZ	56091	7.71	206732	9.87	274812	10.78	206783	13.87	97110	16.14
ZZZZZZ	51686	7.70	201143	9.86	265171	10.78	200097	13.87	94914	16.14
ZZZZZZ	58834	7.71	206543	9.86	272890	10.78	207420	13.87	99405	16.14
ZZZZZZ	55478	7.71	209420	9.86	277014	10.78	210632	13.87	99779	16.14
JA93967-1	57274	7.70	206543	9.86	273854	10.78	213647	13.87	96760	16.14
JA93967-2	46984	7.71	196780	9.86	260100	10.78	197906	13.87	92284	16.14
ZZZZZZ	50149	7.70	206422	9.86	270038	10.78	196510	13.87	87115	16.14
ZZZZZZ	55973	7.70	202156	9.86	267078	10.78	195925	13.87	89502	16.14
ZZZZZZ	47432	7.71	196250	9.86	255679	10.78	186513	13.87	86385	16.14
ZZZZZZ	61014	7.70	198821	9.86	262524	10.78	197047	13.87	93222	16.14
ZZZZZZ	91281	7.70	188860	9.86	255978	10.78	183062	13.87	78564	16.14

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JA93967-5	4D18512.D	109.0	113.0	110.0	105.0
JA93967-6	4D18513.D	107.0	113.0	110.0	105.0
JA93967-7	4D18514.D	108.0	115.0	110.0	106.0
JA93129-1MS	4D18508.D	109.0	114.0	111.0	104.0
JA93129-1MSD	4D18509.D	108.0	113.0	111.0	106.0
V4D818-BS	4D18499.D	108.0	116.0	112.0	103.0
V4D818-MB	4D18498.D	108.0	115.0	111.0	103.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	77-120%
S2 = 1,2-Dichloroethane-D4	70-127%
S3 = Toluene-D8	79-120%
S4 = 4-Bromofluorobenzene	76-118%

Volatile Surrogate Recovery Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Method: SW846 8260B **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JA93967-1	Y118315.D	90.0	86.0	97.0	96.0
JA93967-2	Y118316.D	92.0	87.0	98.0	93.0
JA93967-3	D190227.D	100.0	99.0	115.0	102.0
JA93967-3	D190158.D	92.0	91.0	98.0	85.0
JA93967-4	D190228.D	101.0	99.0	112.0	101.0
JA93967-4	D190159.D	92.0	91.0	101.0	85.0
JA93508-5MS	D190154.D	92.0	89.0	98.0	83.0
JA93508-5MSD	D190155.D	93.0	91.0	97.0	83.0
JA93656-19MS	Y118306.D	93.0	98.0	100.0	92.0
JA93656-19MSD	Y118307.D	93.0	90.0	98.0	92.0
JA94317-2MS	D190234.D	102.0	100.0	111.0	99.0
JA94317-2MSD	D190235.D	101.0	100.0	111.0	96.0
VD7741-BS	D190153.D	93.0	91.0	98.0	83.0
VD7741-MB	D190152.D	90.0	91.0	99.0	85.0
VD7744-BS	D190226.D	100.0	96.0	107.0	93.0
VD7744-MB	D190225.D	98.0	98.0	108.0	97.0
VY5054-BS	Y118302.D	91.0	86.0	100.0	92.0
VY5054-MB	Y118301.D	92.0	91.0	99.0	91.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	67-131%
S2 = 1,2-Dichloroethane-D4	66-130%
S3 = Toluene-D8	76-125%
S4 = 4-Bromofluorobenzene	53-142%

Public Notice March 19, 2011

Intention from US Environmental Protection Agency Region 2, Caribbean Environmental Protection Division ("US EPA"), to Grant Class 3 Permit Modification to Heritage Environmental Services PR, LLC ("Heritage-PR")

Heritage-PR owns and operates a permitted hazardous waste treatment, storage, and disposal facility located at 3080 Hostos Avenue, Mayagűez, PR. The facility is located north of Mayagűez, PR in the Sabanetas Ward approximately 1 km east of Highway 2. Heritage PR operates the facility according to Resource Conservation and Recovery Act (RCRA) permit issued by the USEPA to ensure the proper management of hazardous waste. The facility is permitted to store hazardous waste in tanks and containers. These areas were constructed and are operated following US EPA established standards, which are described in the permit. Permit modifications are prepared to reflect or request changes in the facility operations relevant to the issued permits.

On May 15, 2009, Heritage-PR submitted to the US EPA a Class 1 permit modification requiring prior Agency approval for the transfer of the Lilly del Caribe Mayagüez facility's RCRA Permit in accordance with 40 CFR Part 270.42

On August 18, 2009, US EPA approved the permit transfer, establishing that it is effective on the closing date of the transfer of the Facility. The facility transfer was effective on August 27, 2009.

On December 27, 2010 Heritage-PR submitted a Class 2 permit modification request to the US EPA in order to modify the waste analysis plan to allow industrial, commercial, and institutional facilities generating hazardous waste in Puerto Rico to ship hazardous waste to the Heritage PR facility for storage, consolidation, and efficient transshipment to the United States for treatment, disposal, or recycling. Heritage PR also proposed administrative updates within the permit.

On March 30, 2011, US EPA determined that the December 27, 2010 permit modification request must follow the procedures in 40 C.F.R 270.42 (c) for Class 3 permit modifications.

On June 24, 2011, Heritage-PR submitted a Class 3 permit modification request that was similar to the permit modification request previously filed with the US EPA.

US EPA is inviting public comment on the intention to grant the requested permit modification. The draft permit and supporting documents are available for public review and photocopying during business hours at the following locations:

> Biblioteca General de Recinto Universitario de Mayagüez, Área de Colección Puertorriqueña located at Bulevar Alfonso Valdez #259, Mayagüez, PR.
>
> Mayagűez Regional Office for the Puerto Rico Environmental Quality Board located at Avenida Hostos 828, Suite 201, Mayagűez, PR.
>
> US Environmental Protection Agency, Caribbean Environmental Protection Division, City View Plaza II, Suite 7000 #48 RD. 165 km 1.2 Guaynabo, PR

A forty-five day (45) day public comment period begins March 19, 2012 and ends on May 3, 2012. All comments must be postmarked by May 3, 2012 and sent to Mr. Angel Salgado, Permit Writer, Caribbean Environmental Protection Division, City View Plaza II, Suite 7000 #48 RD. 165 km 1.2 Guaynabo, PR 00968-8069

Mr. Salgado is available by phone at (787) 977-5854, weekdays during business hours. In accordance with 40 CFR 270.42(c), interested parties are invited to participate in a public hearing to be held on April 18, 2012 from 06:30 pm until 09:00 pm at the Club de Leones de Mayagüez located at Road PR-2 Km 150.7, Algarrobo Sector, Mayagüez, PR 00682. In order to accommodate questions or comments about the permit modification request during the meeting, participants must sign up at the entrance to the meeting room. Each registered participant will have one turn to comment or ask questions in the order on the sign-in sheet designated for this purpose. Up to five minutes will be available for participants to address the meeting. The permittee's compliance history during the life of the permit being modified is available from the US EPA contact person.

myPay Transmittal

SmartDocs to: Angel Salgado 03/09/2012 07:23 AM

This email confirms that myPay has transmitted your CorrespondenceAddress transaction to your payroll system on Friday, Mar. 09, 2012. Your payroll system must process this transaction before it will become effective.

Delivered by Defense Finance and Accounting Service

Public Notice March 19, 2011

Intention from US Environmental Protection Agency Region 2, Caribbean Environmental Protection Division ("US EPA"), to Grant Class 3 Permit Modification to Heritage Environmental Services PR, LLC ("Heritage-PR")

Heritage-PR owns and operates a permitted hazardous waste treatment, storage, and disposal facility located at 3080 Hostos Avenue, Mayagűez, PR. The facility is located north of Mayagűez, PR in the Sabanetas Ward approximately 1 km east of Highway 2. Heritage PR operates the facility according to Resource Conservation and Recovery Act (RCRA) permit issued by the USEPA to ensure the proper management of hazardous waste. The facility is permitted to store hazardous waste in tanks and containers. These areas were constructed and are operated following US EPA established standards, which are described in the permit. Permit modifications are prepared to reflect or request changes in the facility operations relevant to the issued permits.

On May 15, 2009, Heritage-PR submitted to the US EPA a Class 1 permit modification requiring prior Agency approval for the transfer of the Lilly del Caribe Mayagüez facility's RCRA Permit in accordance with 40 CFR Part 270.42

On August 18, 2009, US EPA approved the permit transfer, establishing that it is effective on the closing date of the transfer of the Facility. The facility transfer was effective on August 27, 2009.

On December 27, 2010 Heritage-PR submitted a Class 2 permit modification request to the US EPA in order to modify the waste analysis plan to allow industrial, commercial, and institutional facilities generating hazardous waste in Puerto Rico to ship hazardous waste to the Heritage PR facility for storage, consolidation, and efficient transshipment to the United States for treatment, disposal, or recycling. Heritage PR also proposed administrative updates within the permit.

On March 30, 2011, US EPA determined that the December 27, 2010 permit modification request must follow the procedures in 40 C.F.R 270.42 (c) for Class 3 permit modifications.

On June 24, 2011, Heritage-PR submitted a Class 3 permit modification request that was similar to the permit modification request previously filed with the US EPA.

US EPA is inviting public comment on the intention to grant the requested permit modification. The draft permit and supporting documents are available for public review and photocopying during business hours at the following locations:

> Biblioteca General de Recinto Universitario de Mayagüez, Área de Colección Puertorriqueña located at Bulevar Alfonso Valdez #259, Mayagüez, PR.
>
> Mayagűez Regional Office for the Puerto Rico Environmental Quality Board located at Avenida Hostos 828, Suite 201, Mayagűez, PR.
>
> US Environmental Protection Agency, Caribbean Environmental Protection Division, City View Plaza II, Suite 7000 #48 RD. 165 km 1.2 Guaynabo, PR

A forty-five day (45) day public comment period begins March 19, 2012 and ends on May 3, 2012. All comments must be postmarked by May 3, 2012 and sent to Mr. Angel Salgado, Permit Writer, Caribbean Environmental Protection Division, City View Plaza II, Suite 7000 #48 RD. 165 km 1.2 Guaynabo, PR 00968-8069

Mr. Salgado is available by phone at (787) 977-5854, weekdays during business hours. In accordance with 40 CFR 270.42(c), interested parties are invited to participate in a public hearing to be held on April 18, 2012 from 06:30 pm until 09:00 pm at the Club de Leones de Mayagüez located at Road PR-2 Km 150.7, Algarrobo Sector, Mayagüez, PR 00682. In order to accommodate questions or comments about the permit modification request during the meeting, participants must sign up at the entrance to the meeting room. Each registered participant will have one turn to comment or ask questions in the order on the sign-in sheet designated for this purpose. Up to five minutes will be available for participants to address the meeting. The permittee's compliance history during the life of the permit being modified is available from the US EPA contact person.

New Jersey ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- GC Identification Summaries (Hits)
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Raw Data: GH85711.D

Method Blank Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGH3916-MB2	GH85711.D	2	12/08/11	XPL	n/a	n/a	GGH3916

The QC reported here applies to the following samples: **Method:** SW846-8015 (DAI)

JA93967-5, JA93967-6, JA93967-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	ND	100	30	ug/l	
67-56-1	Methanol	ND	200	46	ug/l	

CAS No.	Surrogate Recoveries		Limits
111-27-3	Hexanol	95%	48-150%
111-27-3	Hexanol	82%	48-150%

Raw Data: GH85760.D

Method Blank Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGH3918-MB2	GH85760.D	1	12/09/11	XPL	n/a	n/a	GGH3918

The QC reported here applies to the following samples: **Method:** SW846-8015 (DAI)

JA93967-1, JA93967-2, JA93967-3, JA93967-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	ND	100	38	ug/kg	
67-56-1	Methanol	ND	200	51	ug/kg	

CAS No.	Surrogate Recoveries		Limits
111-27-3	Hexanol	103%	58-137%
111-27-3	Hexanol	103%	58-137%

Raw Data: GH85700.D

Method Blank Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGH3916-MB1	GH85700.D	1	12/08/11	XPL	n/a	n/a	GGH3916

The QC reported here applies to the following samples: **Method:** SW846-8015 (DAI)

GGH3916-BS, JA93907-1MS, JA93907-1MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	ND	100	30	ug/l	
67-56-1	Methanol	ND	200	46	ug/l	

CAS No.	Surrogate Recoveries		Limits
111-27-3	Hexanol	84%	48-150%
111-27-3	Hexanol	85%	48-150%

Raw Data: GH85749.D

Method Blank Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGH3918-MB1	GH85749.D	1	12/09/11	XPL	n/a	n/a	GGH3918

The QC reported here applies to the following samples: **Method:** SW846-8015 (DAI)

GGH3918-BS, JA93968-1MS, JA93968-1MSD

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	ND	100	38	ug/kg	
67-56-1	Methanol	ND	200	51	ug/kg	

CAS No.	Surrogate Recoveries		Limits
111-27-3	Hexanol	88%	58-137%
111-27-3	Hexanol	85%	58-137%

Raw Data: GH85701.D

Blank Spike Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGH3916-BS	GH85701.D	1	12/08/11	XPL	n/a	n/a	GGH3916

The QC reported here applies to the following samples: **Method:** SW846-8015 (DAI)

JA93967-5, JA93967-6, JA93967-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-63-0	Isopropyl Alcohol	5000	4570	91	76-122
67-56-1	Methanol	5000	5210	104	65-130

CAS No.	Surrogate Recoveries	BSP	Limits
111-27-3	Hexanol	95%	48-150%
111-27-3	Hexanol	99%	48-150%

Raw Data: GH85750.D

Blank Spike Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGH3918-BS	GH85750.D	1	12/09/11	XPL	n/a	n/a	GGH3918

The QC reported here applies to the following samples: **Method:** SW846-8015 (DAI)

JA93967-1, JA93967-2, JA93967-3, JA93967-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-63-0	Isopropyl Alcohol	5000	4280	86	73-126
67-56-1	Methanol	5000	5230	105	76-128

CAS No.	Surrogate Recoveries	BSP	Limits
111-27-3	Hexanol	83%	58-137%
111-27-3	Hexanol	86%	58-137%

7.2.2

7

Raw Data: GH85708.D GH85709.D

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JA93907-1MS	GH85708.D	2	12/08/11	XPL	n/a	n/a	GGH3916
JA93907-1MSD	GH85709.D	2	12/08/11	XPL	n/a	n/a	GGH3916
JA93907-1	GH85707.D	1	12/08/11	XPL	n/a	n/a	GGH3916

The QC reported here applies to the following samples: **Method:** SW846-8015 (DAI)

JA93967-5, JA93967-6, JA93967-7

CAS No.	Compound	JA93907-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-63-0	Isopropyl Alcohol	ND		5000	5590	112	5640	113	1	58-140/20
67-56-1	Methanol	ND		5000	6630	133	7130	143	7	47-151/29

CAS No.	Surrogate Recoveries	MS	MSD	JA93907-1	Limits
111-27-3	Hexanol	85%	90%	85%	48-150%
111-27-3	Hexanol	74%	91%	74%	48-150%

Raw Data: GH85757.D GH85758.D

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JA93967
Account: AMANYWP Anderson, Mulholland & Associates
Project: BMSMC, Building 5 Area, PR

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JA93968-1MS	GH85757.D	1	12/09/11	XPL	n/a	n/a	GGH3918
JA93968-1MSD	GH85758.D	1	12/09/11	XPL	n/a	n/a	GGH3918
JA93968-1	GH85751.D	1	12/09/11	XPL	n/a	n/a	GGH3918

The QC reported here applies to the following samples: **Method:** SW846-8015 (DAI)

JA93967-1, JA93967-2, JA93967-3, JA93967-4

CAS No.	Compound	JA93968-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-63-0	Isopropyl Alcohol	1150		5560	6120	89	6110	89	0	58-139/19
67-56-1	Methanol	224		5560	6130	106	6090	106	1	39-160/26

CAS No.	Surrogate Recoveries	MS	MSD	JA93968-1	Limits
111-27-3	Hexanol	74%	78%	58%	58-137%
111-27-3	Hexanol	75%	77%	60%	58-137%

MEMORANDUM

TO: Terry Taylor
Anderson, Mulholland and Associates

DATE: December 20, 2011

FROM: R. Infante

FILE: JA93967

RE: Data Validation
BMSMC: Building 5 Area, PR
SM04.00.06
Accutest Job Number: JA93967

SUMMARY

Full validation was performed on the data for four (4) soil samples, one (1) trip blank, (1) field blank, and one (1) equipment blank analyzed for selected volatile organic compounds using EPA method SW-846 8260B and four (4) soil samples, one (1) trip blank, (1) field blank, and one (1) equipment blank analyzed for alcohols (methanol and isopropyl alcohol) by EPA method SW-846 8015 (DAI). The samples were collected at the BMSMC Building 5 Area in Humacao, PR on December 6, 2011 and submitted to Accutest Laboratories that analyzed and reported the results under delivery group (SDG) JA93967.

The sample results were assessed according to USEPA data validation guidance documents in the following order of precedence: "*USEPA Region 2, SOP HW-24, Standard Operating Procedure for the Validation of Organic Data Acquired using SW-846 Method 8260B (August 2009-Revision 2)*, the *USEPA National Functional Guidelines for Low Concentration Organic Data Review (August 2009-Revision 2)*, the *USEPA National Functional Guidelines for Organic Data Review for Low Concentration (SOP HW-13, August 2009-Revision 3)* (noted herein as the "primary guidance document"). Also, QC criteria from *"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846 (Final Update III, December 1996),"* are utilized. The guidelines were modified to accommodate the non-CLP methodology. The QC criteria and data validation actions listed on the data review worksheets are from the primary guidance document, unless otherwise noted.

In general the data is valid as reported and may be used for decision making purposes. The data results are acceptable for use. Some of the results were qualified.

SAMPLES

The samples included in the review are listed below

FIELD SAMPLE ID	LABORATORY ID	ANALYSIS
I-6 (8.5 - 9.5)	JA93967-1	VOCs, ALCOHOLS
I-4 (9 - 10)	JA93967-2	VOCs, ALCOHOLS
I-6 (5 - 6)	JA93967-3	VOCs, ALCOHOLS
I-6 (5 - 6)D	JA93967-4	VOCs, ALCOHOLS
EB120611	JA93967-5	VOCs, ALCOHOLS
FB120611	JA93967-6	VOCs, ALCOHOLS
TB120611	JA93967-7	VOCs, ALCOHOLS

REVIEW ELEMENTS

Sample data were reviewed for the following parameters, where applicable to the method

- Agreement of analysis conducted with chain of custody (COC) form
- Holding time and sample preservation
- Gas chromatography/mass spectrometry (GC/MS) tunes
- Initial and continuing calibrations
- Method blanks/trip blanks/field blank
- Surrogate spike recovery
- Matrix spike/matrix spike duplicate (MS/MSD) results
- Internal standard performance
- Field duplicate results
- Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) results
- Quantitation limits and sample results

DISCUSSION

Agreement of Analysis Conducted with COC Request

Sample reports corresponded to the analytical request designated on the chain-of-custody form.

Holding Times and Sample Preservation

The cooler temperatures were within the QC acceptance criteria of 4°C ± 2°C.

Sample preservation was acceptable.

Samples analyzed within method recommended holding time.

GC/MS Tunes

The frequency and abundance of bromofluorobenzene (BFB) tunes were within the QC acceptance criteria. All samples were analyzed within the tuning criteria associated with the method.

Initial and Continuing Calibrations

VOCs

The percent relative standard deviations (%RSDs) and response factors (RFs) of all target analytes were within the QC acceptance criteria in the initial calibration. Correlation coefficients (r^2) of target analytes were within the QC acceptance criteria. Ongoing accuracy of the instrument was determined by the analysis of a continuing calibration standard. All initial and continuing calibrations met the acceptance criteria except for the following analytes:

DATE	LAB FILE ID#	CRITERIA OUT: %D	COMPOUND	AFFECTED SAMPLES
12/08/11	cc729-20	21.3	MIBK	JA93967-5; -6; -7
12/08/11	cc5012-20	24.1	Acetone	JA93967-1; -2

Qualify results (J) in affected samples.

Alcohols

The percent relative standard deviations (%RSDs) and response factors (RFs) of all target analytes were within the QC acceptance criteria in the initial calibration. Correlation coefficients (r^2) of target analytes were within the QC acceptance criteria. Ongoing accuracy of the instrument was determined by the analysis of a continuing calibration standard. All initial and continuing calibrations met the acceptance criteria

Method Blank/Trip Blank/Field Blank

Target analytes were not detected in laboratory method blanks for VOCs and alcohols.

No target analytes (VOCs and alcohols) in the trip/ field/equipment blanks associated with this data set.

Surrogate Spike Recovery

The surrogate recoveries were within the laboratory QC acceptance limits in all samples analyzed for VOCs and alcohols.

MS/MSD

VOCs

Matrix spike was performed on samples JA93139-1MS/-1MSD (Aqueous); JA93656-19MS/-19MSD (Soil); JA93508-5MS/-MSD; and JA94317-2MS/-2MSD. Recoveries and RPD for the MS/MSD were within laboratory control.

Alcohols

Matrix spike was performed on samples JA93907-1MS/1MSD (Aqueous) and JA93968-1MS/-1MSD (Soil). Recoveries and RPD for the MS/MSD were within laboratory control limits.

Internal Standard Performance

VOCs

Samples were spiked with the method specified internal standard. Internal standard performance met the QC acceptance criteria in all sample analyses.

Laboratory/Field Duplicate Results

Field duplicate associated with data package were samples JA93967-3/JA93967-4 (VOCs and alcohols). RPD results were within laboratory and generally acceptable control limits.

LCS/LCSD Results

VOCs

The laboratory analyzed one LCS (blank spike) associated with each matrix from this data set. The % recoveries of all spiked analytes were within the laboratory QC acceptance limits.

Alcohols

The laboratory analyzed one LCS (blank spike) associated with each matrix from this data set. The % recoveries of all spiked analytes were within the laboratory QC acceptance limits.

Quantitation Limits and Sample Results

Dilutions were not required with this data set except for the following samples (alcohols):

SAMPLE ID	DILUTION FACTOR	REASON FOR DILUTION
JA93967-5	2 X	None
JA93967-6	2 X	None
JA93967-7	2 X	None

Calculations were spot checked.

More than 40 % RPD for detected Methanol concentrations between the two GC columns in samples JA93967-3 and -4. Results qualified as estimated (J).

Certification

The following samples JA93967-1; JA93967-2; JA93967-3; JA93967-4; JA93967-5; JA93967-6; and JA93967-7 were analyzed following standard procedures accepted by regulatory agencies. The quality control requirements met the methods criteria except in the occasions described in this document. The results are valid.

Rafael Infante
Chemist License 1888

Report of Analysis

Client Sample ID:	I-6 (8.5-9.5)		
Lab Sample ID:	JA93967-1	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846 8260B SW846 5035	**Percent Solids:**	74.7
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y118315.D	1	12/08/11	RS	12/08/11 09:00	n/a	VY5054
Run #2							

	Initial Weight
Run #1	5.4 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	12	8.2	ug/kg	
71-43-2	Benzene	ND	1.2	0.16	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.18	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	6.2	3.3	ug/kg	
108-88-3	Toluene	ND	1.2	0.47	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.23	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		67-131%
17060-07-0	1,2-Dichloroethane-D4	86%		66-130%
2037-26-5	Toluene-D8	97%		76-125%
460-00-4	4-Bromofluorobenzene	96%		53-142%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	I-6 (8.5-9.5)		
Lab Sample ID:	JA93967-1	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846-8015 (DAI)	**Percent Solids:**	74.7
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH85761.D	1	12/09/11	XPL	n/a	n/a	GGH3918
Run #2							

	Initial Weight
Run #1	5.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	ND	130	51	ug/kg	
67-56-1	Methanol	ND	270	69	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	75%		58-137%
111-27-3	Hexanol	76%		58-137%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	I-5 (9-10)		
Lab Sample ID:	JA93967-2	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846 8260B SW846 5035	**Percent Solids:**	71.5
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y118316.D	1	12/08/11	RS	12/08/11 09:00	n/a	VY5054
Run #2							

	Initial Weight
Run #1	5.7 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	23.3 J	12	8.1	ug/kg	
71-43-2	Benzene	ND	1.2	0.16	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.18	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	6.1	3.2	ug/kg	
108-88-3	Toluene	ND	1.2	0.46	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.23	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		67-131%
17060-07-0	1,2-Dichloroethane-D4	87%		66-130%
2037-26-5	Toluene-D8	98%		76-125%
460-00-4	4-Bromofluorobenzene	93%		53-142%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	I-5 (9-10)		
Lab Sample ID:	JA93967-2	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846-8015 (DAI)	**Percent Solids:**	71.5
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH85762.D	1	12/09/11	XPL	n/a	n/a	GGH3918
Run #2							

	Initial Weight
Run #1	5.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	ND	140	53	ug/kg	
67-56-1	Methanol	ND	280	72	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	76%		58-137%
111-27-3	Hexanol	72%		58-137%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	I-4 (5-6)		
Lab Sample ID:	JA93967-3	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846 8260B SW846 5035	**Percent Solids:**	77.9
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	D190227.D	1	12/12/11	ET	12/08/11 09:00	n/a	VD7744
Run #2	D190158.D	1	12/10/11	ET	12/08/11 09:00	n/a	VD7741

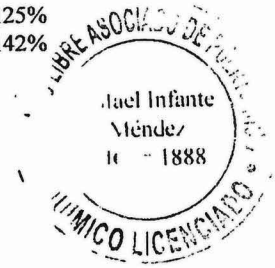
	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.4 g	5.0 ml	1.0 ul
Run #2	5.4 g	5.0 ml	10.0 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	115000 [a]	7400	4900	ug/kg	
71-43-2	Benzene	ND [a]	740	98	ug/kg	
100-41-4	Ethylbenzene	588000	7400	1100	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	240000	37000	19000	ug/kg	
108-88-3	Toluene	178000	7400	2800	ug/kg	
1330-20-7	Xylene (total)	2160000	7400	1400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	92%	67-131%
17060-07-0	1,2-Dichloroethane-D4	99%	91%	66-130%
2037-26-5	Toluene-D8	115%	98%	76-125%
460-00-4	4-Bromofluorobenzene	102%	85%	53-142%

(a) Result is from Run# 2



ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	I-4 (5-6)		
Lab Sample ID:	JA93967-3	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846-8015 (DAI)	**Percent Solids:**	77.9
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH85763.D	1	12/09/11	XPL	n/a	n/a	GGH3918
Run #2							

	Initial Weight
Run #1	5.1 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	62000	130	48	ug/kg	
67-56-1	Methanol [a]	487 J	250	65	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	100%		58-137%
111-27-3	Hexanol	89%		58-137%

(a) More than 40 % RPD for detected concentrations between the two GC columns.

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ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	I-4 (5-6)D		
Lab Sample ID:	JA93967-4	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846 8260B SW846 5035	**Percent Solids:**	75.8
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	D190228.D	1	12/12/11	ET	12/08/11 09:00	n/a	VD7744
Run #2	D190159.D	1	12/10/11	ET	12/08/11 09:00	n/a	VD7741

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.5 g	5.0 ml	1.0 ul
Run #2	5.5 g	5.0 ml	10.0 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	95700 [a]	7600	5000	ug/kg	
71-43-2	Benzene	ND [a]	760	100	ug/kg	
100-41-4	Ethylbenzene	540000	7600	1100	ug/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	258000	38000	20000	ug/kg	
108-88-3	Toluene	210000	7600	2900	ug/kg	
1330-20-7	Xylene (total)	2000000	7600	1400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	92%	67-131%
17060-07-0	1,2-Dichloroethane-D4	99%	91%	66-130%
2037-26-5	Toluene-D8	112%	101%	76-125%
460-00-4	4-Bromofluorobenzene	101%	85%	53-142%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	I-4 (5-6)D		
Lab Sample ID:	JA93967-4	**Date Sampled:**	12/06/11
Matrix:	SO - Soil	**Date Received:**	12/07/11
Method:	SW846-8015 (DAI)	**Percent Solids:**	75.8
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH85764.D	1	12/09/11	XPL	n/a	n/a	GGH3918
Run #2							

	Initial Weight
Run #1	5.0 g
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	59700	130	50	ug/kg	
67-56-1	Methanol [a]	521 J	260	68	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	96%		58-137%
111-27-3	Hexanol	85%		58-137%

(a) More than 40 % RPD for detected concentrations between the two GC columns.

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ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EB120611		
Lab Sample ID:	JA93967-5	**Date Sampled:**	12/06/11
Matrix:	AQ - Equipment Blank	**Date Received:**	12/07/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D18512.D	1	12/08/11	TYG	n/a	n/a	V4D818
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	7.6	ug/l	
71-43-2	Benzene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	J
108-88-3	Toluene	ND	1.0	0.15	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		77-120%
17060-07-0	1,2-Dichloroethane-D4	113%		70-127%
2037-26-5	Toluene-D8	110%		79-120%
460-00-4	4-Bromofluorobenzene	105%		76-118%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	EB120611		
Lab Sample ID:	JA93967-5	**Date Sampled:**	12/06/11
Matrix:	AQ - Equipment Blank	**Date Received:**	12/07/11
Method:	SW846-8015 (DAI)	**Percent Solids:**	n/a
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH85712.D	2	12/08/11	XPL	n/a	n/a	GGH3916
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	ND	100	30	ug/l	
67-56-1	Methanol	ND	200	46	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	78%		48-150%
111-27-3	Hexanol	69%		48-150%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB120611		
Lab Sample ID:	JA93967-6	**Date Sampled:**	12/06/11
Matrix:	AQ - Field Blank Soil	**Date Received:**	12/07/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D18513.D	1	12/08/11	TYG	n/a	n/a	V4D818
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result		RL	MDL	Units	Q
67-64-1	Acetone	ND		10	7.6	ug/l	
71-43-2	Benzene	ND		1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND		1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	J	5.0	1.2	ug/l	
108-88-3	Toluene	ND		1.0	0.15	ug/l	
1330-20-7	Xylene (total)	ND		1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		77-120%
17060-07-0	1,2-Dichloroethane-D4	113%		70-127%
2037-26-5	Toluene-D8	110%		79-120%
460-00-4	4-Bromofluorobenzene	105%		76-118%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	FB120611		
Lab Sample ID:	JA93967-6	**Date Sampled:**	12/06/11
Matrix:	AQ - Field Blank Soil	**Date Received:**	12/07/11
Method:	SW846-8015 (DAI)	**Percent Solids:**	n/a
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH85713.D	2	12/08/11	XPL	n/a	n/a	GGH3916
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	ND	100	30	ug/l	
67-56-1	Methanol	ND	200	46	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	91%		48-150%
111-27-3	Hexanol	86%		48-150%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB120611		
Lab Sample ID:	JA93967-7	**Date Sampled:**	12/06/11
Matrix:	AQ - Trip Blank Soil	**Date Received:**	12/07/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D18514.D	1	12/08/11	TYG	n/a	n/a	V4D818
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	7.6	ug/l	
71-43-2	Benzene	ND	1.0	0.22	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.21	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.2	ug/l	
108-88-3	Toluene	ND	1.0	0.15	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.17	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		77-120%
17060-07-0	1,2-Dichloroethane-D4	115%		70-127%
2037-26-5	Toluene-D8	110%		79-120%
460-00-4	4-Bromofluorobenzene	106%		76-118%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB120611		
Lab Sample ID:	JA93967-7	**Date Sampled:**	12/06/11
Matrix:	AQ - Trip Blank Soil	**Date Received:**	12/07/11
Method:	SW846-8015 (DAI)	**Percent Solids:**	n/a
Project:	BMSMC, Building 5 Area, PR		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GH85714.D	2	12/08/11	XPL	n/a	n/a	GGH3916
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
67-63-0	Isopropyl Alcohol	ND	100	30	ug/l	
67-56-1	Methanol	ND	200	46	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
111-27-3	Hexanol	89%		48-150%
111-27-3	Hexanol	82%		48-150%

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ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SLL
FB
wTB

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
Tel: 732-329-0200 FAX: 732-329-3499/3480
www. acutest.com

FED-EX Tracking #: 8737 9421 1914
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: JA93967

Client / Reporting Information

Company Name: Anderson Mulholland Assoc., Inc.
Street Address: 110 Corporate Park
City / State / Zip: White Plains, NY 10604
Project Contact / E-mail: 914-251-0400 Ext. 309
Phone #: Terry Taylor
Fax #:
Sampler(s) Name(s): Terry Taylor/Nestor Rivera
Phone #:

Project Information

Project Name: Bristol-Myers Squibb, Humacao PR
Street:
City / State:
Project #: Building 5
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)
Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

A: Ethylbenzene, benzene, toluene, xylene, MIBK, acetone by 8260B
B: Methanol and IPA by 8015B
C: % Solids

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	A	B	C	LAB USE ONLY
-1	I-6 (8.5-9.5)		12/6/11	1000	TT	Soil	5					2			3	X	X	X	F.S.1
-2	I-5 (9-10)			1100			5					2			3	X	X	X	1404
-3	I-4 (5-6)			1145			5					2			3	X	X	X	4965
-4	I-4 (5-6) D			1145			4					1			3	X	X		985
-5	EB 120611			1200			2	2								X	X		
-6	FB 120611			1145			2	2								X	X		
-7	TB 120611			1200			3	3								X	X		

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [x] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM) / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

8737442119l4
Ag/leo 11-28-11 300 12/7/11
•3encors

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	12/6/2011	1 FED EX	2 FED EX	12-7-11 1135	2 [signature]
3		3	4		4
5		5	Custody Seal # 936	☒ Intact ☐ Not Intact	Preserved where applicable ☑ On Ice ☑ Cooler Temp. 3.0° CB

1A Cu 1.

JA93967: Chain of Custody
Page 1 of 2

ACCUTEST
JA93967

DATA REVIEW WORKSHEETS

Project Number:____JA93967_____
Date:____12/06/2011_____

REVIEW OF VOLATILE ORGANIC PACKAGE

The following guidelines for evaluating volatile organics were created to delineate required validation actions. This document will assist the reviewer in using professional judgment to make more informed decision and in better serving the needs of the data users. The sample results were assessed according to USEPA data validation guidance documents in the following order of precedence: USEPA Region 2, SOP HW-24, Validating Volatile Organic Compounds by GC/MS, SW-846 Method 8260B (August, 2009-Revision 2), the USEPA National Functional Guidelines for Low/Medium Concentration Organic Data Review (SOW SOM01.2 SOP HW-33, August 2009 – Revision 2), the USEPA National Functional Guidelines for Organic Data Review for Low Concentration (SOP HW-13, August, 2009-Revision 3). Also, QC criteria from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846 (Final Update IV, December 1998)," specifically for Methods 8000/8015 are utilized. The QC criteria and data validation actions listed on the data review worksheets are from the primary guidance document, unless otherwise noted.
The hardcopied (laboratory name) _Accutest_____ data package received has been reviewed and the quality control and performance data summarized. The data review for VOCs included:

Lab. Project/SDG No.: __JA93967_____ Sample matrix: ___Soil_____
No. of Samples: _____7_____

Trip blank No.: ____JA93967-7_____
Field blank No.: ____JA93967-6_____
Equipment blank No.:_JA93967-5_____
Field duplicate No.:__JA93967-3/-4_____

___X___ Data Completeness
___X___ Holding Times
___N/A_ GC/MS Tuning
___N/A_ Internal Standard Performance
___X___ Blanks
___X___ Surrogate Recoveries
___X___ Matrix Spike/Matrix Spike Duplicate
___X___ Laboratory Control Spikes
___X___ Field Duplicates
___X___ Calibrations
___X___ Compound Identifications
___X___ Compound Quantitation
___X___ Quantitation Limits

Overall Comments:_IPA_and_Methanol_by_SW846-8015_(DAI)_____
_____

Definition of Qualifiers:
J- Estimated results
U- Compound not detected
R- Rejected data
UJ- Estimated nondetect

Reviewer: Rafael Infante
Date:__12/19/2011_____

DATA REVIEW WORKSHEETS

DATA COMPLETENESS

MISSING INFORMATION	DATE LAB. CONTACTED	DATE RECEIVED

All criteria were met __X__
Criteria were not met
and/or see below _____

HOLDING TIMES

The objective of this parameter is to ascertain the validity of the results based on the holding time of the sample from time of collection to the time of analysis.

Complete table for all samples and note the analysis and/or preservation not within criteria

SAMPLE ID	DATE SAMPLED	DATE ANALYZED	pH	ACTION
All samples analyzed within the recommended method holding time				

Criteria

Aqueous samples – 14 days from sample collection for preserved samples (pH $\leq$ 2, 4°C), no air bubbles.
Aqueous samples – 7 days from sample collection for unpreserved samples, 4°C, no air bubbles.
Soil samples- 7 days from sample collection.
Cooler temperature (Criteria: 4 $\pm$ 2 °C): 3°C - OK

Actions

If the VOCs vial(s) have air bubbles, estimate positive results (J) and reject nondetects (R).
If the % solids of soil samples is 10-50%, estimates positive results (J) and nondetects (UJ)
If the % solid of soil samples is < 10%, estimate positive results (J) and reject nondetects (R).
If holding times are exceeded but < 14 days beyond criteria, estimate positive results (J) and nondetects (UJ).
If holding times are exceeded but < 28 days beyond criteria, estimate positive results (J) and reject nondetects (R).
If holding times are grossly exceeded (> 28 days beyond criteria), reject all results (R).
If samples were not iced or if the ice were melted (> 10°C), estimate positive results (J) and nondetects (UJ).

All criteria were met __N/A___
Criteria were not met see below _____

GC/MS TUNING

The assessment of the tuning results is to determine if the sample instrumentation is within the standard tuning QC limits

__N/A_ The BFB performance results were reviewed and found to be within the specified criteria.

__N/A_ BFB tuning was performed for every 12 hours of sample analysis.

If no, use professional judgment to determine whether the associated data should be accepted, qualified or rejected.

List the samples affected:
_____

If mass calibration is in error, all associated data are rejected.

All criteria were met __X___
Criteria were not met
and/or see below _____

CALIBRATION VERIFICATION

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing and maintaining acceptable quantitative data.

Date of initial calibration:_____11/12/11_____
Dates of continuing calibration:_12/08/11_____12/09/11_____
Instrument ID numbers:_____GCGH_____
Matrix/Level:__Aqueous/low_____

DATE	LAB FILE ID#	CRITERIA OUT RFs, %RSD, %D, r	COMPOUND	SAMPLES AFFECTED
Initial and continuing calibration meet method performance criteria				

Criteria

All RFs must be > 0.05 regardless of method requirements for SPCC.
All %RSD must be ≤ 15 % regardless of method requirements for CCC.
All %Ds must be ≤ 20% regardless of method requirements for CCC.
It should be noted that Region 2 SOP HW-24 does not specify criterion for the curve correlation coefficient (r). A limit for r of ≥ 0.995 has therefore been utilized as professional judgment.

Actions

If any compound has an initial RF or a continuing RF of < 0.05, estimate positive results (J) and reject nondetects (R), regardless of method requirements.
If any compound has a %RSD > 15%, estimate positive results (J) and use professional judgment to qualify nondetects.
If any compound has a %RSD > 90%, estimate positive results (J) and reject nondetects (R).
If any compound has a % D > 20%, estimate positive results (J) and reject nondetects (R).
If any compound has a % D > 20%, estimate positive results (J) and nondetects (UJ).
If any compound has a % D > 90%, estimate positive results (J) and reject nondetects (R).
If any compound has r > 0.995, estimate positive results and nondetects.

A separate worksheet should be filled for each initial curve

All criteria were met __X__
Criteria were not met
and/or see below _____

V A. BLANK ANALYSIS RESULTS (Sections 1 & 2)

The assessment of the blank analysis results is to determine the existence and magnitude of contamination problems. The criteria for evaluation of blanks apply only to blanks associated with the samples, including trip, equipment, and laboratory blanks. If problems with any blanks exist, all data associated with the case must be carefully evaluated to determine whether or not there is an inherent variability in the data for the case, or if the problem is an isolated occurrence not affecting other data.

List the contamination in the blanks below. High and low levels blanks must be treated separately.

Laboratory blanks

DATE ANALYZED	LAB ID	LEVEL/ MATRIX	COMPOUND	CONCENTRATION UNITS
All_method_blank_meeth_method_specific_criteria				

Field/Equipment/Trip blank

DATE ANALYZED	LAB ID	LEVEL/ MATRIX	COMPOUND	CONCENTRATION UNITS
No_target_analytes_detected_in_the_trip/field/equipment_blanks_analyzed_with_this_data package.				

All criteria were met __X__
Criteria were not met
and/or see below _____

V B. BLANK ANALYSIS RESULTS (Section 3)

Blank Actions

Action Levels (ALs) should be based upon the highest concentration of contaminant determined in any blank. Do not qualify any blank with another blank. The ALs for samples which have been diluted should be corrected for the sample dilution factor and/or % moisture, where applicable. No positive sample results should be reported unless the concentration of the compound in the samples exceeds the ALs:

ALs = 10x the amount of common contaminants (methylene chloride, acetone, 2-butanone, and toluene)
ALs = 5x for any other compounds

Specific actions are as follows:

If the concentration is < sample quantitation limit (SQL) and ≤ AL, report the compound as not detected (U) at the SQL.
If the concentration is ≥ SQL but ≤ AL, report the compound as not detected (U) at the reported concentration.
If the concentration is ≥ SQL and > AL, report the concentration unqualified.

Notes:

High and low level blanks must be treated separately
Compounds qualified "U" for blank contamination are still considered "hits" when qualifying for calibration criteria.

CONTAMINATION SOURCE/LEVEL	COMPOUND	CONC/UNITS	AL/UNITS	SQL	AFFECTED SAMPLES

All criteria were met __X__
Criteria were not met
and/or see below _____

SURROGATE SPIKE RECOVERIES

Laboratory performance of individual samples is established by evaluation of surrogate spike recoveries. All samples are spiked with surrogate compounds prior to sample analysis. The accuracy of the analysis is measured by the surrogate percent recovery. Since the effects of the sample matrix are frequently outside the control of the laboratory and may present relatively unique problems, the validation of data is frequently subjective and demands analytical experience and professional judgment.
List the percent recoveries (%Rs) which do not meet the criteria for surrogate recovery.
Matrix: solid/aqueous

SAMPLE ID	SURROGATE COMPOUND				ACTION
	~~1,2-DCA~~	~~DBFM~~	~~TOL-d8~~	~~BFB~~	
_All_surrogate_recoveries_within_laboratory_control_limits					
Surrogate-_Hexane					

QC Limits* (Aqueous)
_____LL_to_UL___ ____to_____ ___to_____ ___to_____ ___to_____
QC Limits* (Solid-Low)
_____LL_to_UL___ ____to_____ ___to_____ ___to_____ ___to_____
QC Limits* (Solid-Med)
_____LL_to_UL___ ____to_____ ___to_____ ___to_____ ___to_____

1,2-DCA = 1,2-Dichloromethane-d4
DBFM = Dibromofluoromethane
TOL-d8 = Toluene-d8
BFB = Bromofluorobenzene

* QC limits are laboratory in-house performance criteria, LL = lower limit, UL = upper limit.
* If QC limits are not available, use limits of 80 – 120 % for aqueous and 70 – 130 % for solid samples.

Actions:

QUALITY	%R < 10%	%R = 10% - LL	%R > UL
Positive results	J	J	J
Nondetects results	R	UJ	Accept

Surrogate action should be applied:
If one or more surrogate in the VOC fraction is out of specification, but has a recovery of > 10%.

If any one surrogate in a fraction shows < 10 % recovery.

All criteria were met __X___
Criteria were not met
and/or see below _____

VII. A MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD)

This data is generated to determine long term precision and accuracy in the analytical method for various matrices. This data alone cannot be used to evaluate the precision and accuracy of individual samples. If any % R in the MS or MSD falls outside the designated range, the reviewer should determine if there are matrix effects, i.e. LCS data are within the QC limits but MS/MSD data are outside QC limit.

1. MS/MSD Recoveries and Precision Criteria

The laboratory should use one MS and a duplicate analysis of an unspiked field sample if target analytes are expected in the sample. If target analytes are not expected, MS/MSD should be analyzed. List the %Rs, RPD of the compounds which do not meet the criteria.

Sample ID:__JA93907-1_____ Matrix/Level:___AQUEOUS_____
Sample ID:__JA93968-1_____ Matrix/Level:___SOIL_____

MS OR MSD	COMPOUND	% R	RPD	QC LIMITS	ACTION
__MS/MSD_recoveries_and_RPD_within_laboratory_control_limits_____					

Note: no action taken; spike amount low relative to sample concentration.

* QC limits are laboratory in-house performance criteria, LL = lower limit, UL = upper limit.
* If QC limits are not available, use limits of 70 – 130 %.

Actions:

QUALITY	%R < LL	%R > UL
Positive results	J	J
Nondetects results	R	Accept

MS/MSD criteria apply only to the unspiked sample, its dilutions, and the associated MS/MSD samples:

If the % R for the affected compounds were < LL (or 70 %), qualify positive results (J) and nondetects (UJ).
If the % R for the affected compounds were > UL (or 130 %), only qualify positive results (J).
If 25 % or more of all MS/MSD %R were < LL (or 70 %) or if two or more MS/MSD %Rs were < 10%, qualify all positive results (J) and reject nondetects (R).

A separate worksheet should be used for each MS/MSD pair.

All criteria were met __X___
Criteria were not met
and/or see below _____

VII. B MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD – Unspiked Compounds

It should be noted that Region 2 SOP HW-24 does not specify a MS/MSD criteria for the unspiked compounds in the sample. A %RSD of < 50% has therefore been utilized as professional judgment.

If all target analytes were spiked in the MS/MSD, this review element is not applicable.

List the %RSD of the compounds which do not meet the criteria.

Sample ID:_____ Matrix/Level/Unit:_____

COMPOUND	SAMPLE CONC.	MS CONC.	MSD CONC.	% RSD	ACTION

Actions:

* If the % RSD > 50, qualify the positive result in the unspiked samples as estimated (J).
* If the % RSD is not calculated (NC) due to nondetected value, use professional judgment to qualify the data.

All criteria were met __X__
Criteria were not met
and/or see below _____

VIII. LABORATORY CONTROL SAMPLE (LCS) ANALYSIS

This data is generated to determine accuracy of the analytical method for various matrices.

1. LCS Recoveries Criteria

Where LCS spiked with the same analyte at the same concentrations as the MS/MSD? Yes or No. If no make note in data review memo.
List the %R of compounds which do not meet the criteria

LCS ID	COMPOUND	% R	QC LIMIT

___Recoveries_within_laboratory_control_limits_____

* QC limits are laboratory in-house performance criteria, LL = lower limit, UL = upper limit.
* If QC limits are not available, use limits of 70 – 130 %.

Actions:

QUALITY	%R < LL	%R > UL
Positive results	J	J
Nondetects results	R	Accept

All analytes in the associated sample results are qualified for the following criteria.

If 25 % of the LCS recoveries were < LL (or 70 %), qualify all positive results (j) and reject nondetects (R).
If two or more LCS were below 10 %, qualify all positive results as (J) and reject nondetects (R).

2. Frequency Criteria:

Where LCS analyzed at the required frequency and for each matrix? Yes or No.
If no, the data may be affected. Use professional judgment to determine the severity of the effect and qualify data accordingly. Discuss any actions below and list the samples affected.

All criteria were met __X__
Criteria were not met
and/or see below _____

IX. FIELD DUPLICATE PRECISION

Sample IDs: __JA93967-3/-4_____ Matrix:_SOIL_____

Field duplicates samples may be taken and analyzed as an indication of overall precision. These analyses measure both field and lab precision; therefore, the results may have more variability than laboratory duplicates which only laboratory performance. It is also expected that soil duplicate results will have a greater variance than water matrices due to difficulties associated with collecting identical field duplicate samples.

The project QAPP should be reviewed for project-specific information.
Suggested criteria: RPD ± 30% for aqueous samples, RPD ± 50 % for solid samples. If both samples and duplicate are <5 SQL, the RPD criteria is doubled.

COMPOUND	SQL	SAMPLE CONC.	DUPLICATE CONC.	RPD	ACTION
RPD within laboratory and generally acceptable control limits					

Actions:

Qualify as estimated positive results (J) and nondetects (UJ) for the compound that exceeded the above criteria. For organics, only the sample and duplicate will be qualified.

If an RPD cannot be calculated because one or both of the sample results is not detected, the following actions apply:

If one sample result is not detected and the other is greater than 5x the SQL qualify (J/UJ).

If one sample value is not detected and the other is greater than 5x the SQL and the SQLs for the sample and duplicate are significantly different, use professional judgment to determine if qualification is appropriate.

If one sample value is not detected and the other is less than 5x, use professional judgment to determine if qualification is appropriate.

If both sample and duplicate results are not detected, no action is needed.

All criteria were met __N/A__
Criteria were not met
and/or see below _____

X. INTERNAL STANDARD PERFORMANCE

The assessment of the internal standard (IS) parameter is used to assist the data reviewer in determining the condition of the analytical instrumentation.

List the internal standard area of samples which do not meet the criteria.

* Area of +100% or -50% of the IS area in the associated calibration standard.
* Retention time (RT) within 30 seconds of the IS area in the associated calibration standard.

DATE	SAMPLE ID	IS OUT	IS AREA	ACCEPTABLE RANGE	ACTION

Actions:

1. IS actions should be applied to the compound quantitated with the out-of-control ISs

QUALITY	IS AREA < -25%	IS AREA = -25 % TO – 50%	IS AREA > + 100%
Positive results	J	J	J
Nondetected results	R	UJ	ACCEPT

2. If a IS retention time varies more than 30 seconds, the chromatographic profile for that sample must be examined to determine if any false positive or negative exists. For shifts of a large magnitude, the reviewer may consider partial or total rejection of the data for the sample fraction.

All criteria were met __X__
Criteria were not met
and/or see below _____

XII. SAMPLE QUANTITATION

The sample quantitation evaluation is to verify laboratory quantitation results. In the space below, please show a minimum of one sample calculation:

JA93967-3

Methanol RF = 13.07

[ ] = (5058)/(13.07)

= 386.99 OK

More than 40 % RPD for detected Methanol concentrations between the two GC columns in samples JA93967-3 and -4.

All criteria were met __X__
Criteria were not met
and/or see below _____

XII. QUANTITATION LIMITS

A. Dilution performed

SAMPLE ID	DILUTION FACTOR	REASON FOR DILUTION
JA93967-5	2 x	None
JA93967-6	2 x	None
JA93967-7	2 x	None

B. Percent Solids

List samples which have ≤ 50 % solids

Actions:

If the % solids of a soil sample is 10-50%, estimate positive results (J) and nondetects (UJ)

If the % solids of a soil sample is < 10%, estimate positive results (J) and reject nondetects (R)

DATA REVIEW WORKSHEETS

Project Number:____JA93967_____
Date:____12/06/2011_____

REVIEW OF VOLATILE ORGANIC PACKAGE

The following guidelines for evaluating volatile organics were created to delineate required validation actions. This document will assist the reviewer in using professional judgment to make more informed decision and in better serving the needs of the data users. The sample results were assessed according to USEPA data validation guidance documents in the following order of precedence: USEPA Region 2, SOP HW-24, Validating Volatile Organic Compounds by GC/MS, SW-846 Method 8260B (August, 2009-Revision 2), the USEPA National Functional Guidelines for Low/Medium Concentration Organic Data Review (SOW SOM01.2 SOP HW-33, August 2009 – Revision 2), the USEPA National Functional Guidelines for Organic Data Review for Low Concentration (SOP HW-13, August, 2009-Revision 3). Also, QC criteria from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846 (Final Update IV, December 1998)," specifically for Methods 8000/8260B are utilized. The QC criteria and data validation actions listed on the data review worksheets are from the primary guidance document, unless otherwise noted.
The hardcopied (laboratory name) _Accutest_____ data package received has been reviewed and the quality control and performance data summarized. The data review for VOCs included:

Lab. Project/SDG No.: __JA93967_____ Sample matrix: ___Soil_____
No. of Samples: _____7_____

Trip blank No.: ____JA93967-7_____
Field blank No.: ____JA93967-6_____
Equipment blank No.:_JA93967-5_____
Field duplicate No.:__JA93967-3/-4_____

___X___ Data Completeness
___X___ Holding Times
___X___ GC/MS Tuning
___X___ Internal Standard Performance
___X___ Blanks
___X___ Surrogate Recoveries
___X___ Matrix Spike/Matrix Spike Duplicate
___X___ Laboratory Control Spikes
___X___ Field Duplicates
___X___ Calibrations
___X___ Compound Identifications
___X___ Compound Quantitation
___X___ Quantitation Limits

Overall Comments:_Selected_VOC's_by_SW846-8260B_____
_____

Definition of Qualifiers:
J- Estimated results
U- Compound not detected
R- Rejected data
UJ- Estimated nondetect

Reviewer: Rafael deFaust
Date:__12/19/2011_____

DATA REVIEW WORKSHEETS

DATA COMPLETENESS

MISSING INFORMATION	DATE LAB. CONTACTED	DATE RECEIVED

All criteria were met _X_
Criteria were not met
and/or see below _____

HOLDING TIMES

The objective of this parameter is to ascertain the validity of the results based on the holding time of the sample from time of collection to the time of analysis.

Complete table for all samples and note the analysis and/or preservation not within criteria

SAMPLE ID	DATE SAMPLED	DATE ANALYZED	pH	ACTION
All samples analyzed within the recommended method holding time				

Criteria

Aqueous samples – 14 days from sample collection for preserved samples (pH $\leq$ 2, 4°C), no air bubbles.
Aqueous samples – 7 days from sample collection for unpreserved samples, 4°C, no air bubbles.
Soil samples- 7 days from sample collection.
Cooler temperature (Criteria: 4 $\pm$ 2 °C): 3°C - OK

Actions

If the VOCs vial(s) have air bubbles, estimate positive results (J) and reject nondetects (R).
If the % solids of soil samples is 10-50%, estimates positive results (J) and nondetects (UJ)
If the % solid of soil samples is < 10%, estimate positive results (J) and reject nondetects (R).
If holding times are exceeded but < 14 days beyond criteria, estimate positive results (J) and nondetects (UJ).
If holding times are exceeded but < 28 days beyond criteria, estimate positive results (J) and reject nondetects (R).
If holding times are grossly exceeded (> 28 days beyond criteria), reject all results (R).
If samples were not iced or if the ice were melted (> 10°C), estimate positive results (J) and nondetects (UJ).

All criteria were met __X___
Criteria were not met see below _____

GC/MS TUNING

The assessment of the tuning results is to determine if the sample instrumentation is within the standard tuning QC limits

__X___ The BFB performance results were reviewed and found to be within the specified criteria.

__X___ BFB tuning was performed for every 12 hours of sample analysis.

If no, use professional judgment to determine whether the associated data should be accepted, qualified or rejected.

List the samples affected:
_____

If mass calibration is in error, all associated data are rejected.

All criteria were met ____
Criteria were not met
and/or see below __X__

CALIBRATION VERIFICATION

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing and maintaining acceptable quantitative data.

Date of initial calibration:_____10/20/11_____10/28/11_____11/08/11_____
Dates of continuing calibration:_12/08/11_____12/09/11_12/12/11____12/08/11_____
Instrument ID numbers:_____GCMS4D_____GCMSD_____GCMSY_____
Matrix/Level:__Aqueous/low_____

DATE	LAB FILE ID#	CRITERIA OUT RFs, %RSD, **%D**, r	COMPOUND	SAMPLES AFFECTED
12/08/2011	cc729-20	21.3	MIBK	JA93967-5;-6;-7
12/08/2011	cc5012-20	24.1	Acetone	JA93967-1;-2

Criteria

All RFs must be > 0.05 regardless of method requirements for SPCC.
All %RSD must be ≤ 15 % regardless of method requirements for CCC.
All %Ds must be ≤ 20% regardless of method requirements for CCC.
It should be noted that Region 2 SOP HW-24 does not specify criterion for the curve correlation coefficient (r). A limit for r of ≥ 0.995 has therefore been utilized as professional judgment.

Actions

If any compound has an initial RF or a continuing RF of < 0.05, estimate positive results (J) and reject nondetects (R), regardless of method requirements.
If any compound has a %RSD > 15%, estimate positive results (J) and use professional judgment to qualify nondetects.
If any compound has a %RSD > 90%, estimate positive results (J) and reject nondetects (R).
If any compound has a % D > 20%, estimate positive results (J) and reject nondetects (R).
If any compound has a % D > 20%, estimate positive results (J) and nondetects (UJ).
If any compound has a % D > 90%, estimate positive results (J) and reject nondetects (R).
If any compound has r > 0.995, estimate positive results and nondetects.

A separate worksheet should be filled for each initial curve

All criteria were met _X_
Criteria were not met
and/or see below _____

V A. BLANK ANALYSIS RESULTS (Sections 1 & 2)

The assessment of the blank analysis results is to determine the existence and magnitude of contamination problems. The criteria for evaluation of blanks apply only to blanks associated with the samples, including trip, equipment, and laboratory blanks. If problems with any blanks exist, all data associated with the case must be carefully evaluated to determine whether or not there is an inherent variability in the data for the case, or if the problem is an isolated occurrence not affecting other data.

List the contamination in the blanks below. High and low levels blanks must be treated separately.

Laboratory blanks

DATE ANALYZED	LAB ID	LEVEL/ MATRIX	COMPOUND	CONCENTRATION UNITS
All_method_blank_meeth_method_specific_criteria				

Field/Equipment/Trip blank

DATE ANALYZED	LAB ID	LEVEL/ MATRIX	COMPOUND	CONCENTRATION UNITS
_No_target_analytes_detected_in_the_trip/field/equipment_blanks_analyzed_with_this_data package.				

All criteria were met __X__
Criteria were not met
and/or see below _____

V B. BLANK ANALYSIS RESULTS (Section 3)

Blank Actions

Action Levels (ALs) should be based upon the highest concentration of contaminant determined in any blank. Do not qualify any blank with another blank. The ALs for samples which have been diluted should be corrected for the sample dilution factor and/or % moisture, where applicable. No positive sample results should be reported unless the concentration of the compound in the samples exceeds the ALs:

ALs = 10x the amount of common contaminants (methylene chloride, acetone, 2-butanone, and toluene)
ALs = 5x for any other compounds

Specific actions are as follows:

If the concentration is < sample quantitation limit (SQL) and $\leq$ AL, report the compound as not detected (U) at the SQL.
If the concentration is $\geq$ SQL but $\leq$ AL, report the compound as not detected (U) at the reported concentration.
If the concentration is $\geq$ SQL and > AL, report the concentration unqualified.

Notes:

High and low level blanks must be treated separately
Compounds qualified "U" for blank contamination are still considered "hits" when qualifying for calibration criteria.

CONTAMINATION SOURCE/LEVEL	COMPOUND	CONC/UNITS	AL/UNITS	SQL	AFFECTED SAMPLES

All criteria were met __X__
Criteria were not met
and/or see below _____

SURROGATE SPIKE RECOVERIES

Laboratory performance of individual samples is established by evaluation of surrogate spike recoveries. All samples are spiked with surrogate compounds prior to sample analysis. The accuracy of the analysis is measured by the surrogate percent recovery. Since the effects of the sample matrix are frequently outside the control of the laboratory and may present relatively unique problems, the validation of data is frequently subjective and demands analytical experience and professional judgment.
List the percent recoveries (%Rs) which do not meet the criteria for surrogate recovery.
Matrix: solid/aqueous

SAMPLE ID	SURROGATE COMPOUND				ACTION
	1,2-DCA	DBFM	TOL-d8	BFB	
_All_surrogate_recoveries_within_laboratory_control_limits_____					

QC Limits* (Aqueous)
_____LL_to_UL___ ____to_____ ___to_____ ___to_____ ___to_____
QC Limits* (Solid-Low)
_____LL_to_UL___ ____to_____ ___to_____ ___to_____ ___to_____
QC Limits* (Solid-Med)
_____LL_to_UL___ ____to_____ ___to_____ ___to_____ ___to_____

1,2-DCA = 1,2-Dichloromethane-d4
DBFM = Dibromofluoromethane
TOL-d8 = Toluene-d8
BFB = Bromofluorobenzene

* QC limits are laboratory in-house performance criteria, LL = lower limit, UL = upper limit.
* If QC limits are not available, use limits of 80 – 120 % for aqueous and 70 – 130 % for solid samples.

Actions:

QUALITY	%R < 10%	%R = 10% - LL	%R > UL
Positive results	J	J	J
Nondetects results	R	UJ	Accept

Surrogate action should be applied:
If one or more surrogate in the VOC fraction is out of specification, but has a recovery of > 10%.
If any one surrogate in a fraction shows < 10 % recovery.

All criteria were met __X__
Criteria were not met
and/or see below _____

VII. A MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD)

This data is generated to determine long term precision and accuracy in the analytical method for various matrices. This data alone cannot be used to evaluate the precision and accuracy of individual samples. If any % R in the MS or MSD falls outside the designated range, the reviewer should determine if there are matrix effects, i.e. LCS data are within the QC limits but MS/MSD data are outside QC limit.

1. MS/MSD Recoveries and Precision Criteria

The laboratory should use one MS and a duplicate analysis of an unspiked field sample if target analytes are expected in the sample. If target analytes are not expected, MS/MSD should be analyzed. List the %Rs, RPD of the compounds which do not meet the criteria.

Sample ID:__JA93139-1_____ Matrix/Level:___AQUEOUS_____
Sample ID:__JA93656-19_____ Matrix/Level:___SOIL_____
Sample ID:__JA93508-5_____ Matrix/Level:___SOIL_____
Sample ID:__JA94317-2_____ Matrix/Level:___SOIL_____

MS OR MSD	COMPOUND	% R	RPD	QC LIMITS	ACTION
__MS/MSD_recoveries_and_RPD_within_laboratory_control_limits_____					

Note: no action taken; spike amount low relative to sample concentration.

* QC limits are laboratory in-house performance criteria, LL = lower limit, UL = upper limit.
* If QC limits are not available, use limits of 70 – 130 %.

Actions:

QUALITY	%R < LL	%R > UL
Positive results	J	J
Nondetects results	R	Accept

MS/MSD criteria apply only to the unspiked sample, its dilutions, and the associated MS/MSD samples:

If the % R for the affected compounds were < LL (or 70 %), qualify positive results (J) and nondetects (UJ).
If the % R for the affected compounds were > UL (or 130 %), only qualify positive results (J).
If 25 % or more of all MS/MSD %R were < LL (or 70 %) or if two or more MS/MSD %Rs were < 10%, qualify all positive results (J) and reject nondetects (R).

A separate worksheet should be used for each MS/MSD pair.

All criteria were met __X__
Criteria were not met
and/or see below _____

VII. B MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD – Unspiked Compounds

It should be noted that Region 2 SOP HW-24 does not specify a MS/MSD criteria for the unspiked compounds in the sample. A %RSD of < 50% has therefore been utilized as professional judgment.

If all target analytes were spiked in the MS/MSD, this review element is not applicable.

List the %RSD of the compounds which do not meet the criteria.

Sample ID:_____ Matrix/Level/Unit:_____

COMPOUND	SAMPLE CONC.	MS CONC.	MSD CONC.	% RSD	ACTION

Actions:

* If the % RSD > 50, qualify the positive result in the unspiked samples as estimated (J).
* If the % RSD is not calculated (NC) due to nondetected value, use professional judgment to qualify the data.

All criteria were met __X__
Criteria were not met
and/or see below _____

VIII. LABORATORY CONTROL SAMPLE (LCS) ANALYSIS

This data is generated to determine accuracy of the analytical method for various matrices.

1. LCS Recoveries Criteria

Where LCS spiked with the same analyte at the same concentrations as the MS/MSD? Yes or No. If no make note in data review memo.
List the %R of compounds which do not meet the criteria

LCS ID COMPOUND % R QC LIMIT

___Recoveries_within_laboratory_control_limits_____

* QC limits are laboratory in-house performance criteria, LL = lower limit, UL = upper limit.
* If QC limits are not available, use limits of 70 – 130 %.

Actions:

QUALITY	%R < LL	%R > UL
Positive results	J	J
Nondetects results	R	Accept

All analytes in the associated sample results are qualified for the following criteria.

If 25 % of the LCS recoveries were < LL (or 70 %), qualify all positive results (j) and reject nondetects (R).
If two or more LCS were below 10 %, qualify all positive results as (J) and reject nondetects (R).

2. Frequency Criteria:

Where LCS analyzed at the required frequency and for each matrix? Yes or No.
If no, the data may be affected. Use professional judgment to determine the severity of the effect and qualify data accordingly. Discuss any actions below and list the samples affected.

All criteria were met __X__
Criteria were not met
and/or see below _____

IX. FIELD DUPLICATE PRECISION

Sample IDs: __JA93967-3/-4_____ Matrix:_SOIL_____

Field duplicates samples may be taken and analyzed as an indication of overall precision. These analyses measure both field and lab precision; therefore, the results may have more variability than laboratory duplicates which only laboratory performance. It is also expected that soil duplicate results will have a greater variance than water matrices due to difficulties associated with collecting identical field duplicate samples.

The project QAPP should be reviewed for project-specific information.
Suggested criteria: RPD ± 30% for aqueous samples, RPD ± 50 % for solid samples. If both samples and duplicate are <5 SQL, the RPD criteria is doubled.

COMPOUND	SQL	SAMPLE CONC.	DUPLICATE CONC.	RPD	ACTION
RPD within laboratory and generally acceptable control limits					

Actions:

Qualify as estimated positive results (J) and nondetects (UJ) for the compound that exceeded the above criteria. For organics, only the sample and duplicate will be qualified.

If an RPD cannot be calculated because one or both of the sample results is not detected, the following actions apply:

If one sample result is not detected and the other is greater than 5x the SQL qualify (J/UJ).

If one sample value is not detected and the other is greater than 5x the SQL and the SQLs for the sample and duplicate are significantly different, use professional judgment to determine if qualification is appropriate.

If one sample value is not detected and the other is less than 5x, use professional judgment to determine if qualification is appropriate.

If both sample and duplicate results are not detected, no action is needed.

All criteria were met __X__
Criteria were not met
and/or see below _____

X. INTERNAL STANDARD PERFORMANCE

The assessment of the internal standard (IS) parameter is used to assist the data reviewer in determining the condition of the analytical instrumentation.

List the internal standard area of samples which do not meet the criteria.

* Area of +100% or -50% of the IS area in the associated calibration standard.
* Retention time (RT) within 30 seconds of the IS area in the associated calibration standard.

DATE	SAMPLE ID	IS OUT	IS AREA	ACCEPTABLE RANGE	ACTION

_Internal_standard_area_within_laboratory_control_limits_____

Actions:

1. IS actions should be applied to the compound quantitated with the out-of-control ISs

QUALITY	IS AREA < -25%	IS AREA = -25 % TO – 50%	IS AREA > + 100%
Positive results	J	J	J
Nondetected results	R	UJ	ACCEPT

2. If a IS retention time varies more than 30 seconds, the chromatographic profile for that sample must be examined to determine if any false positive or negative exists. For shifts of a large magnitude, the reviewer may consider partial or total rejection of the data for the sample fraction.

All criteria were met __X__
Criteria were not met
and/or see below _____

XII. SAMPLE QUANTITATION

The sample quantitation evaluation is to verify laboratory quantitation results. In the space below, please show a minimum of one sample calculation:

JA93967-3

ACETONE RF = 0.064

[ ] = (4268)(50)/(288513)(0.064)

= 11 .56 ppb OK

All criteria were met __X__
Criteria were not met
and/or see below _____

XII. QUANTITATION LIMITS

A. Dilution performed

SAMPLE ID	DILUTION FACTOR	REASON FOR DILUTION

B. Percent Solids

List samples which have ≤ 50 % solids

Actions:

If the % solids of a soil sample is 10-50%, estimate positive results (J) and nondetects (UJ)

If the % solids of a soil sample is < 10%, estimate positive results (J) and reject nondetects (R)